

The Telegrapher's Trilogy

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The Telegrapher's Trilogy consists of three short stories, linked through time and characters by the communication code invented by Samuel Morse in 1844.

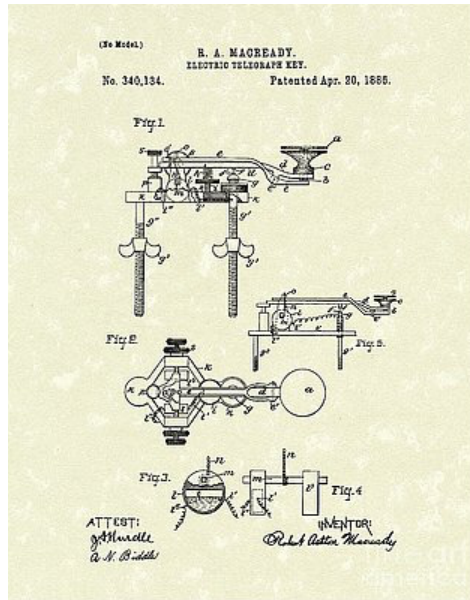
The story begins in the Southwestern US with the "The Telegrapher of Canyon Diablo", moves forward with "The Perkinsville Station" and culminates in "Nate Goes to War".

The time period spans from the late 1800's through World War II and captures the spread of the railroad in the Southwest and the telegraph that made safe and timely travel possible.

I hope you enjoy the stories!

“The Telegrapher of Canyon Diablo”

Chapter 1. The End of the World.



“El fin del mundo...”

Sam muttered that out loud with a few choice expletives under his breath as he stood on the edge of the canyon and watched the sun set over the mountain peak north of Flagstaff – 34 miles west of the end of the world. Vivid orange turned fire red as the sun dropped below the horizon and dust in the air changed the hue to a golden glow – then to a shade like a champagne sky as the first stars appeared overhead.

The canyon stretched out before him was now his world – ‘the end of the world’ as the Spanish said when they first encountered Arizona.

It was the world of rails and telegraph poles that he had been working on for the past 15 years.

The telegraph wasn’t new to Arizona – the US Army had strung iron wire across the southern and central part of the state as far back as 1871 when General Crook set out to tame the Apaches. His need for communications put in motion a vast network of iron wire and telegraph operators that did for the Apache Wars what they did for the Civil War – the first networked communications operations supporting military operations forever changed warfare – those who knew, won - those who were out of communication, lost.

The limited smoke signals of the Apache communicators were no match for the brass pounding over the iron wire.

Sam was never in the military; he hadn’t served as a soldier in the Civil War but had done his part as a telegrapher in Grant’s army. Now he was glad to be on his own in the civilian world, even if it meant he

had once again to be the sharp end of the spear in building the railroad across northern Arizona for the Atlantic & Pacific Railroad Company in the year 1880.

He walked back to his tent set up a hundred yards from the canyon's edge and threw back the flap. It was early February and the rails were put down nearly to the canyon's edge where they stopped – almost 250 feet above the canyon bottom and 600 feet across the gorge.

It was cold out in the desert.

“What a devil of a place”, Sam thought, as he mused on the name first given to the spot when it was discovered by an Army surveyor, a Lieutenant Whipple in 1853 who was surveying a possible route across northern Arizona for a rail line along the 35th parallel.

The Lieutenant named it Canyon Diablo on his survey – the Devil's Canyon, and little could he have known how presciently he had named the place.

Canyon Diablo would become one of the most famous railroad construction projects in the newly developing west and in the process make a name for itself as the town too tough to live.

In the annals of the wild west, Tombstone would live on in infamy - but the newly forming outpost of Canyon Diablo would out-do, out-gun and out-wild not only Tombstone, but Dodge City, Silver City and any number of other notorious towns of the west in its short life.

And Sam Hensel was there to put it on the line – not online as we say today, but *on the line* – the iron wire that connected the great endeavor of bridging the Canyon Diablo with a railroad trestle and a telegraph line.

Sam threw a piece of pinyon pine into the iron stove in the corner of the tent and checked the stovepipe to make sure the fire was pulling properly. The coals were still hot from earlier in the afternoon and the log flared up, snapped, popped and began to give off the fragrance of the Southwest.

He sat down on his roughhewn chair, lit the lantern over his head, and his pipe, and pulled up to the tiny desk and began to send his report back up the line.

The battery voltage was low, and he was having trouble copying the operator in Winslow so he checked the ground connection and adjusted the sounder as best he could - he was barely able to complete the message that he was now in place at the canyon and would begin to handle traffic for the construction workers, the train and the boss.

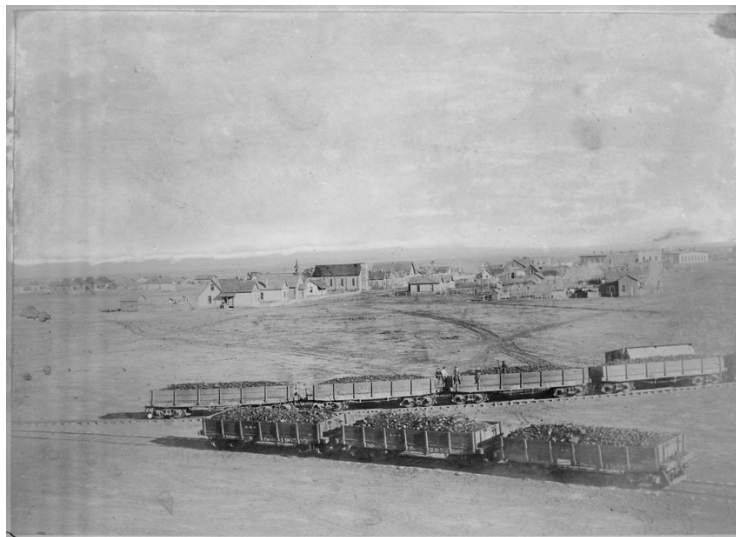
It was 7PM on a Tuesday night and as he began to chat with KL in Winslow about what it was like out on the edge, he heard his first gun shot at Canyon Diablo. It would not be his last.

He was comforted by the Colt Peacemaker strapped on his gun belt as he sent code on his key...



Canyon Diablo, Arizona

Chapter 2. Winslow, Arizona 1880



Birds Eye View of Winslow, looking East. Atlantic and Pacific Railway cars on converging tracks in the foreground of the arid Arizona terrain, ca. 1890

“KL” Williams was a tall drink of water from Amarillo, Texas.

The ladies found him irresistible and men found him a true friend and hard worker.

He leaned against the corner of the depot in Winslow, Arizona and watched the flat cars roll by loaded with ties and telegraph poles headed to the end of the line at Canyon Diablo, 26 miles west of town.

He flicked the remnant of his cigarillo into the dirt, ground it with the toe of his cowboy boot and twisted the ends of his handlebar mustache as he turned on his heel and sauntered back into the station, hat tilted back on his blond head.

“Station” was a bit too glamorous for the shack that did duty for the hard-scrabble collection of buildings that made up Winslow in the early 1880’s. Once the line was completed it would grow into a fine stop in the northern desert and eventually become home to the luxurious La Posada, a Fred Harvey hotel made famous by overnight stays from movie stars and other notable clientele as they passed between LA and the big cities out east.

Albert Einstein, John Wayne, Betty Grable, Amelia Earhart, FDR and many others enjoyed the hospitality of Fred Harvey in his flagship hotel.

But now, it was a mere frontier town in the young west - albeit with a milder temper than the lawless rail camp being set up further down the line at Canyon Diablo.

A cold winter wind blew out of the west, kicking up dirt and tumbleweeds as KL slammed the door shut and plopped down at the telegrapher’s desk.

He had a good view out either side of the bay windows and it gave him pleasure to sit there, warming himself by the wood fire in the stove in the corner.

Now that he had finished checking the batteries earlier in the morning - a daily chore - and topping them off to deal with the issue he had the other night when working SG out in the canyon, he called Sam on the wire.

“SG SG KL KL”... clicked out of the sounder and he closed the switch on his key to wait for Sam to reply with his di-dit di-dit.

The two had known each other for years, both having worked at various depots in the same division of the Atlantic & Pacific Railroad.

And when the A&P would later become the Sante Fe - actually, the Atchison, Topeka & Sante Fe Railroad - they would both still be lightning slingers, reminiscing about the build-out of the line through the canyon. It was a rich harvest of nearly unbelievable stories which many youngsters heard, then passed on into the twentieth century.

Some of the best of them - although true as the day is long and the sun is bright in the Southwest - became mythical and were told with a twinkle in the eye and a wink and a nod, giving the impression they were just more cracker-barrel fodder by a pot-bellied stove in a railroad depot.

What Sam sent back on the wire to KL made him utter a low whistle - Sam's fist was shaky and KL knew he was shook up bad. His dits were stuttering and the dahs were too long. Clearly, whatever had happened to Sam had deeply affected him.

And now KL himself wished he had a revolver on a gun belt...



An old depot in the Arizona desert - telegrapher's desk in the bay window gives a clear view up and down the track... Perkinsville. Photo by Bob Houf

Chapter 3. The Yolo and the Mountain Lion

Sam cleared the telegraph order for more ties and poles over the #9 iron wire then started to explain what had happened the night before.

"u sur ws antlers on jk rabbit?"

KL broke in on Sam with his question since he didn't want Sam to get too far into his story before he got this cleared up.

Sam was sending code to KL in Winslow and explaining why he was so rattled the last time they had talked over the wire out to Canyon Diablo.

KL thought he was being spoofed by Sam - who ever heard of a black-tailed jackrabbit with antlers?

So, KL had broken the wire and had Sam repeat his message and Sam sent, “Di-dit” - “I”, the lightning slinger’s abbreviation for “yes sir”. And with that, Sam kept on with his story.

Sam had been down on the rim of the canyon just before sundown - the golden hours of the late afternoon when things got quiet in the desert and you could feel the end of the day come over the land.

If you were quite still and in tune with nature, you could hear the birds quiet down, the rustle of the desert rats and even the swish-swish die away of the Diamondback rattlesnakes as they scraped over the sand.

Those who spent time out in the Sonoran Desert could feel the change come over them and it was a good time to squat on your haunches and reflect on the closing of the day.

Sam gazed out over the golden glow of the desert - he looked up to the left at the deep gorge and scanned across from his vantage point on the ledge where he sat, then looked right toward the area where the workers were preparing to put the trestle.

As is peculiar to human eyesight, when surveying a still landscape it is quite easy to detect the smallest movement.

And in Sam’s case that evening it was the slightest twitch of what looked like antlers on a spike-buck mule deer, barely visible just above a rock about 25 yards up the gorge and below him by a few feet.

Except it wasn’t a mule deer at all.

The jackrabbit - this one a good two feet long - hopped up on a ledge level with Sam and stood on his hind paws - the sign of alertness for all jackrabbits.

And he was crowned with spiked antlers!

Sam rubbed his eyes, blinked and looked again.

The yolo took off like a rocket directly toward Sam and not ten yards behind him a mature male mountain lion exploded up from the canyon below and streaked toward them both.

Sam was just beginning to assess the danger he was in and getting up when the yolo ricocheted between his legs and the lion leapt straight up and over him - gaining on the jackrabbit in every stride of his muscular legs.

The hot breath of the big cat smelled foul in Sam’s nostrils as a rear paw of the lion caught the back of his head a glancing blow.

Sam didn't have time, nor did he think about pulling his Colt Peacemaker because the entire event was over in less time than it takes to tell about it.

The yolo zigzagged back down into the canyon with the mountain lion hard on his heels as they disappeared over the edge.

Sam stood there in disbelief - who would ever believe this?

He picked up his hat from the desert floor where the cat had knocked it off when he flew overhead and whacked the dust off on his leg.

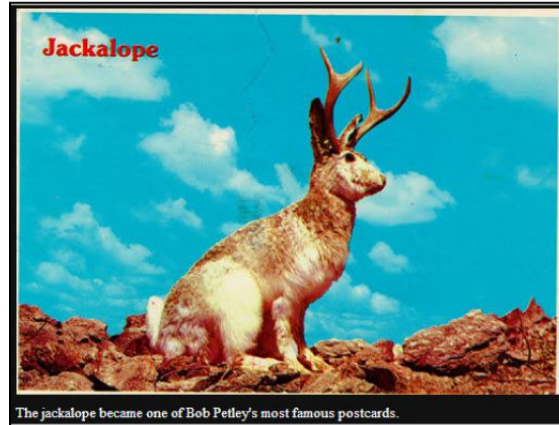
He slowly walked back to his tent, shaken badly and sat down at his desk by the sounder and called KL in Winslow...

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Note - It wasn't until the early 1930's that a study was done that proved a viral infection of jackrabbits (**Shope papilloma virus - SPV**) could cause horny growths on their head which gave rise to the myth of the western 'jackalope' - a taxidermist's combination of antelope antlers mounted on a jackrabbit's head and a favorite of tourists visiting the west...



The Song of the Talking Wire (oil on canvas) painted by Henry Farny in 1904. A Sioux Indian presses his ear against a telegraph pole, listening out of curiosity and bewilderment to a technology that along with the railroad would help change the west forever.



Chapter 4. Prickly Pear Pete

Now Pete was Navajo of the Bitter Water clan and his secret war name was *“hosh niteeli”*, which loosely translated means prickly pear - a type of cactus found all over the Southwest.

This specimen has spines large and small - the uninitiated who think the prickly pear only has the larger visible needles and the rest of the fleshly ear has none are in for an unpleasant surprise when they grab one.

And the fact that cattle munch on them amiably, chomping away as if a mouthful of needles was just another bunch of hay, gives one the impression this beautiful flowering cactus is harmless.

But those who spend much time in the Sonoran desert know the truth about this lovely bit of flora - its fruit is tasty, its flower beautiful but its true essence is that it is armed to the teeth - or should we say ears - with its own defense system, spiny needles and nearly miniature little needles that look like fuzz if you're silly enough to get one close to your eyes.

So, the deceptive beauty with underlying powerful defense mechanisms made Pete's secret war name curiously appropriate for the man known around Canyon Diablo as Prickly Pear Pete.

Of course, the Navajo custom of naming meant his name, *“hosh niteeli”* might not even be revealed to his wife.

But he did have nicknames and depending upon his age at the time and who he was around, they varied from *“Pete”*, *“PP”* and by the cowboys who would soon form the Hash Knife outfit of the Aztek Land and Cattle Company in Arizona, *“Dick”*.

He did not care for the cowboys and stayed clear of them.

In addition to his day job on the railroad section gang, driving spikes all day long, Pete took a fancy to Sam and his telegraphy.

It is an undeniable fact that the art of sending words along a wire faster than a speeding bullet (which, in the 1880's was indeed the fastest thing known to man) that could be heard miles away and put in motion activity unheard of in the Navajo nation was fascinating to many, and most of all to Pete.

The telegrapher of the 19th century was the high-technology mystery man (or woman - there were many women who became telegraphers, often learning the trade from their father or mother) of the era and were viewed with something approaching awe, or at least respect, since they were the first to know of happenings outside their own town or village. And it was all done in a mysterious 'language' only the initiated knew.

Pete first heard the sounds of Morse code emanating from Sam's tent one evening as he went back to wash up from pounding iron spikes all day long into railroad tie plates.

Sam was himself pounding brass on his telegraph key at a steady pace - 20 words per minute down the wire to KL in Winslow and ordering more parts for the trestle.

Pete was a Navajo musician - he had learned the art and skill of the six finger hole cedar flute as a young boy and now was quite accomplished. At the end of the day he would play his flute on the edge of the canyon and watch the sun set.

Many of the railroad workers listened at a distance to the plaintive notes of the Indian flute but gave Pete his privacy as he closed the day in Navajo fashion.

As he walked by the tent, Pete paused and got the cadence of the clicks and clacks coming from the telegraph sounder on Sam's desk. Although they sounded harsh, Pete could discern the rhythm and cadence of Sam's fist as he sent, and KL replied.

Underlying the harshness was a compelling mystery that called to his spirit.

Although he knew Sam was 'talking' to someone on the other end of the wire, he had no idea what was being said. Pete's English was good enough for casual conversation and if he knew what those code elements meant he was sure he could follow along.

So, each evening Pete made it a point to walk and pause behind the telegrapher's tent and absorb the rhythm of the code as Sam sent then received messages from KL.

After a few weeks of this Pete sat on the edge of the canyon one evening after he played his evening song to end the day then began to experiment with his cedar flute.

He tried warbling techniques to see if he could imitate Sam's sending but that didn't work.

He tried short, quick blasts of air that quickly dissipated through the resonant chambers of the flute, making sure his notes were played so softly others would not know what he was doing.

A few days of experimentation and Pete had figured out how to use his flute to emulate the Morse code characters Sam and KL conversed in.

With the deft closure of two of the six finger holes Pete could do a reasonable job of making Morse come out of a traditional cedar flute of the Navajo culture.

He had listened long enough to Sam's brass pounding to know the most common sounds of letters in English words that were often repeated although the use of telegrapher's abbreviations made the content indecipherable.

After the fourth week of experimentation, Pete went out to say goodbye to the setting sun with his flute and when he finished, he walked by Sam's tent which was quiet, but the lantern burned and cast a warm glow through the canvas wall.

Pete stopped, brought his flute up and began to use the two finger hole method he had devised to send 'code' and proceeded to send a series of characters he had memorized by listening to Sam - "didit-dit didididit didit" and "dahdahdidit" "didididahdit".

Sam was laying on his bunk reading a novel by the light of the lantern when he distinctly heard the musical note of American Morse code coming softly through the wall of the tent.

He absentmindedly heard the abbreviation for copy, "cpi" then "73", or Best Regards without consciously thinking about what he was hearing. Both abbreviations were commonly used in Morse communication - "cpi" meant you were copying the other operator and 73 meant you were signing off the wire and wishing the other operator well.

Sam had heard Pete's flute many times, wafting back from the edge of the canyon at sunset but now he was hearing the flute sending code.

Sam sat bolt upright when he realized what he was hearing and put his full attention on the next series of two notes coming through the tent canvas...



Chapter 5. Water

Water in Arizona was the most precious commodity in the late 1800's when the railroad was put through Cañon Diablo. Gold and silver aren't commodities, but you couldn't find them without water.

It was and still is pretty difficult to starve to death in the Sonoran Desert of the great American Southwest unless you intend to do so - or are particularly careless, ignorant or blind.

Your culinary choices may be greatly reduced from normal fare but you can go without food for weeks or eat things you would never dream of when you're sated - but you can't go without water for long in the desert.

That's why the A&P Railroad laid out a spur line south of the mainline down to Navajo Springs, a few miles below the planned route.

Navajo Springs was a good 100 miles east of Cañon Diablo and all the water the newly minted town needed - if you dared call such a motley collection of shacks, watering holes, dance halls and brothels a town - had to be brought in on rail from the spring until they could pump water 250 feet up from the stream in the bottom of the gorge.

And to get a tank car full of 3,500 gallons of fresh water out to the canyon took a full day of work. Filling the tank car at the spring, pulling the car up to the mainline and on down to the end of the line and then filling the water tank in town was time consuming and a constant chore.

The town quickly grew to several thousand workers and camp-followers, all of whom were as thirsty as one could imagine when the temperature soared above one hundred degrees.

The water was barely drinkable when it arrived at Cañon Diablo but still appreciated since the alcohol in the warm beer and bad whiskey just made a person thirstier.

Sam had placed a standing order over the telegraph wire to keep tank cars running daily and KL got used to seeing them go by the depot in Winslow.

As each one passed by, he sent the OS order to Sam who would acknowledge the 'On Station' and let the depot messenger boy, Little Jack, know when the tank car was expected so he could get the men together for the refilling process at the town's water tank.

That system worked fine until one day the future cowboy outlaw portion of the Hash Knife gang decided it was time to rob the train.

Again.

Cañon Diablo had grown rapidly with the trestle project which got stalled when they discovered the bridge iron works were too short to span the canyon.

This caused a delay of months while the iron was remanufactured out east and in turn caused a vast number of workers to have too much time on their hands and that meant trouble in the neighborhood.

Sam had already been involved in the hiring process of the first sheriff for the city a few months before.

The railroad bosses and bigwigs in Flagstaff demanded some form of law and order so it was decided to put out a request for someone that could tame this wild western town of rail workers, prostitutes, gamblers and grifters who had come to stay until the bridge was completed.

Sam took the description for the sheriff's role they had created and sent it humming and singing down the wire to KL in Winslow. KL forwarded it on to a number of depots in New Mexico and Colorado who dispersed it far and wide.

They missed trying to hire Wyatt Earp who had moved three years earlier to Tombstone and would make history about the same time their search began in a gunfight at the OK corral.

But they did conjure up a some-time lawman and part-time gunslinger from Deadwood Gulch, South Dakota, who had recently cleaned up that mining town and installed a form of primitive law and order. Of course, to do that it took a few dead bodies and cracked heads but after a while the bloodshed stopped and order of a sort prevailed.

At least long enough for "Bull" Sethwood to move on down to Colorado where he was talking to the station agent in Denver when the sounder started chattering. As he copied the code the agent looked at Bull with his head cocked to one side.

"Hmmm... Bull, they's a need for your type down in Arizona Territory. Seems the railroad is going across a canyon down theah and a town sprung up and needs a bit o'help setting itself right."

Now Bull was looking for his next job and had a hankering to see this new part of the wild west, especially after he had to move on after Deadwood Gulch. When a U.S. Marshall finally made it out to South Dakota it became clear the brand of law and order Bull had in mind was substantially different than the government's standard.

In fact, Bull was on the lam, even though the town he hastily left behind had been happy enough with his work.

So, Bull had the Denver Union Station agent pound out an immediate message over the wire that he was interested and would be on his way to look over this town that cried out for his brand of peace.

KL's sounder rattled to life and he started to copy the message forwarded from operator "DC" at station DN in Denver to the operator in Gallup, New Mexico.

He smiled to himself as he copied "dahdididit dididah daaaaaah daaaaaah dididit dit dah didididit didahdah dit-dit dit-dit dahdidit" which spelled BULL SETHWOOD in American Morse code.

KL had heard about this roughneck 'lawman', as had every telegraph operator in the western divisions as they passed along tales - some even true - of his exploits over the wire back east.

Authors of a sensational style had discovered the romance, danger and profit of writing articles for the eastern newspapers about the wild west and a character like Sethwood made ready copy that was eaten up by dudes back east. But first they had to hear about such men and that news came by telegraph.

The Atlantic & Pacific Telegraph Company took care of a lot of the news passed east of the Mississippi until the A&P merged with Western Union in 1878.

And though the news traveled along the Western Union wires some of their telegraphers also served as the railroad agent and telegrapher in smaller towns and depots out west and thus any and all news was known by the broader telegraph community.

If a juicy news item about a renegade lawman taming a mining town came across the wire, every lightning slinger for a thousand miles instantly knew about it.

Bull Sethwood, who had made a name for himself in Deadwood Gulch - and was known for his rowdy method of dispensing justice from the barrel of a six-shooter - was about to become the first and fastest sheriff to die in Cañon Diablo over a tank car of water...



Tank car



Denver Union Station 1881- Call sign DN

Chapter 6. Buck



Zuni Mountain logging railroad, New Mexico

William Bradford Preskitt was born in a log cabin on the French Broad River near Asheville in 1832.

He fought in the Civil War on the Confederate side with the 3rd North Carolina Mounted Infantry - Mountaineers; agile on horseback and a skilled sharpshooter as were most of the young men who hunted the Blue Ridge Mountains of Western North Carolina.

He went by the handle "Buck" which his father gave him when he took his first white-tail deer as a young teenager in the mountains on the east side of the Tennessee/North Carolina border in what would become, shortly after the turn of the century, the Pisgah National Forest.

Due to a deep desire to see the bigger world and escape from the hard-scrabble farm he grew up on - and leaving behind the unfolding devastation of the South after the war - Buck headed west until he found himself a position on a logging railroad in the Zuni Mountains of New Mexico.

In addition to a strong back and a sure hand with an axe and crosscut saw, Buck had also picked up the telegrapher's trade as he worked his way across country.

A chance meeting of the younger Buck with the agent's pretty daughter in a train depot of the Little Rock & Fort Smith Railroad in Arkansas led to a whirlwind courtship - Buck and Janet were soon married and settled down to a pleasant home, raised two boys and a girl and enjoyed life. Buck picked up the telegraphic art from his father-in-law and worked in the depot as an operator until a tragic and fatal railroad accident ended their family life.

The result was Buck moving on, alone, still strong at age 50 with an axe over his shoulder and a pocket telegraph key in his grip.

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The Ponderosa Pine forest of the Zuni Mountains of western New Mexico south of Gallup was being logged to fill the need for mining timbers, railroad ties and telegraph poles as the Atlantic & Pacific Railroad built their line west from Gallup across Arizona to California.

The most recent load of poles had been loaded on the narrow-gauge railroad in the forest and headed to Canyon Diablo to fill an order placed by Sam. The challenging task of running the telegraph line down in to the canyon, across the stream and up the western side was consuming more poles than had been planned for.

Buck on occasion tapped into the temporary logging wire set up in the forest with his pocket key and 'read the mail' to keep up on the world while he lived in the high country of the Zuni Mountain forest.

"DK", the dayshift telegrapher for the lumber operation knew Buck had also been an operator and they enjoyed evening discussions about their craft and the places they had been. DK allowed Buck to tap the wire on his evenings off and work some of the other operators down the line in Gallup using his pocket key.

And that is how Buck came to learn of the opening for an operator in the small depot on the line in Holbrook - between Gallup and Winslow. The dispatcher he worked one evening told him they were looking for a good fist to handle the wire to the west as well as the wire down to Fort Apache in the White Mountains, both of which joined in Holbrook.

That connection led to Buck pulling up stakes and taking the logging train to Gallup - riding in the cab of the Shay logging engine. He enjoyed the ride down the mountain through the cool pine-scented air as Stellar Jays darted and cavorted through the trees around them.

At Gallup he hitched a ride on the train out to Winslow, stepped off the car into the dust of Holbrook and went inside the depot.

After an hour of quiet discussion with "DT" - the station operator at Holbrook who was departing for California - Buck assumed the role of station agent and telegrapher. He wasted no time in connecting with the Gallup station and KL in Winslow as well as Sam in Canyon Diablo, introducing himself at a steady 20 words per minute, signing himself as "BP" on the key.

He also quickly cut in to the Fort Apache wire and got into the routine of handling orders for water and freight for the Fort. The rail line through Holbrook and its telegraph line opened up a new route for supplies to the US Army operation that General Crook and his Cavalry conducted in the war against the Apaches.

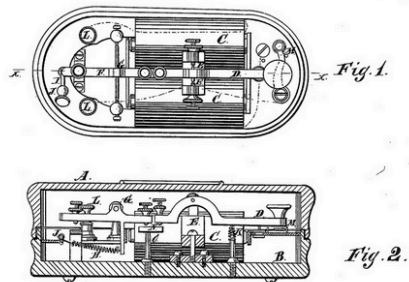
The Apaches named the wire *pesh-bi-yalti*, or "white man's talking wire" and had a superstitious regard for the system tending to stay away from it, although they invented ingenious ways of damaging it. The wire was occasionally cut by the Indians to harass the soldiers and some used the trick of cutting out a lengthy section of wire and hiding it.

But the cleverest of Indian tricks was to cut the wire and then splice it back together with a piece of buckskin in such a way it was difficult to see where the break was from the ground. This was particularly effective when the wire was strung through trees instead of on telegraph poles where the branches hid the wire.

Buck missed the sweet-smelling pines and the cool mountain air of the Zuni Mountains but felt certain there was a reason he had been pulled back into society - such as it was - in Holbrook.

At the end of his first day he stepped to the window of the depot, looked out at the desert scene and wondered what he had gotten himself into...

E. A. HILL & H. J. SCHNEIDER.
Pocket Telegraph Relay.
No. 165,578. Patented July 13, 1875.

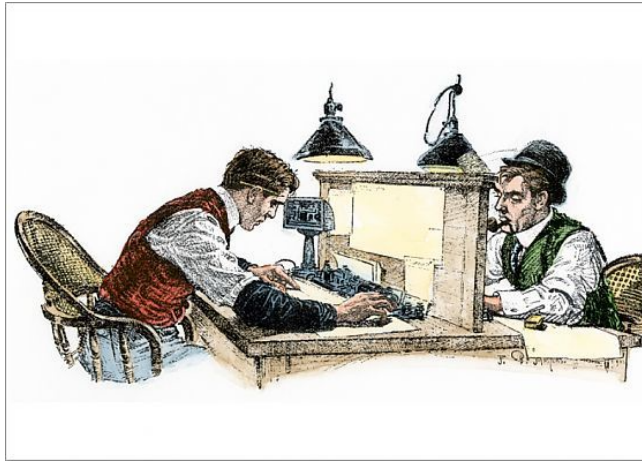


Witnesses:
H. L. Brown
J. S. Brown

Inventors:
Edward A. Hill
Hermann J. Schneider
Lewis L. Brown
attys



Chapter 7. A Gang of Thieves



Western Union telegrapher Tony Bonafidio before he was caught...

Jed McDougle did not, as they said in the old days, stay on the windy side of care.

Truth be told, Jed was just plain and simple a bad man - evil was not too strong a word - and anyone who has lived an unsheltered life knows that there are, indeed, genuinely evil people roaming this earth, bad to the bone and meaner than snakes.

Based on a record of malfeasance that trailed him from young adulthood and given the rough and tumble old west he occupied, it was rather a miracle that he lived to be 30.

But he had and now McDougle had a reputation in the west as a desperado of the first order - and one that lawmen would rather shoot on sight then take a chance on bringing to a finer justice through jail and a courtroom.

So, it was natural enough that Jed would wind his way down to the Arizona Territory and set himself up at a card game in Canyon Diablo. The reputation of this dusty outpost on the edge of the canyon fit a man of McDougle's nature to a T and since Bull Sethwood hadn't shown up yet to wear a badge, the tough folk of the town made room for him.

But no one turned his back on him, either.

In a few months Bull did, however, show up and the big men from Flagstaff and the A&P Railroad proceeded to anoint Sethwood as their first sheriff, badge and all, on a Saturday noon in August.

The Tallyho Dance Hall was the place of the appointment and half the town turned out to see this specimen of the law and order fraternity from Deadwood Gulch they had heard so much about get his badge and charter to keep the peace.

Jed McDougle was not one of them.

The lawless part of the Hash Knife outfit of the future Aztec Land & Cattle Company was a gang of thieves, murderers and train robbers who holed up in the eastern foothills of the San Francisco Peak at Flagstaff. They often rode to Canyon Diablo to escape notice and cool off after a job - letting their trail grow cold in a place with no law and order to worry about.

'Like attracts like' in relationships was a fit law of attraction for the way Jed fell in quickly with the Hash Knife outfit, and it didn't take long before they plotted a payroll robbery on the train from Gallup.

Not only good men knew American Morse code and had pocket telegraph keys - Tony Bonafidio had been a Western Union operator out east in earlier days but was caught tipping off local investors of impending monetary policy in Washington DC and subsequently spent a few years in prison reflecting on a new life in the west.

His good breeding and equestrian upbringing in the east helped make him comfortable on a horse with a western saddle and his thieving and rebellious nature found a better fit in crime the further west he went.

So, he rode out of Canyon Diablo a few miles, dismounted and walked his horse over to the rails, put his ear to a rail and listened - eyes closed - for the vibration of a coming train.

When he was satisfied he would not meet a train, he tethered his horse to the nearest telegraph pole and climbed up to the insulator, clipped a wire on the line and listened to the relay on his pocket telegraph key.

Sam was acknowledging a message from the Gallup office of the next payroll shipment when Bonafidio caught the word payroll and the train number and time of arrival.

Nearly flying down the pole, he leapt on his horse and rode for the Last Dollar Saloon in Canyon Diablo, chaps flapping in the wind as he spurred his horse.

Slowing at the edge of town from a gallop to a trot to a walk, Bonafidio swung down off his horse and hitched it to the post out front by the water trough.

As calmly as he could he called McDougle and the others to a table and with a bottle of whiskey and drinks all around he filled them in on the payroll train schedule.

As the bottle emptied, they finished their plans and got up to leave just as Bull Sethwood walked through the swinging doors, a new badge pinned on his vest.

Jed bumped into Bull's shoulder as they passed, and Bull turned around to see who this hombre was, but the desperado and the gang had passed on and were mounting their horses.

Bull did not recognize McDougle, for if he had, there would have been an instant gunfight in the saloon - no doubt adding more holes to the perforated walls that had witnessed more than a few in past months.

Sam Hensel had just finished his last train orders and ordering more materials for the trestle and was headed into the saloon to have a beer when he saw the Hash Knife gang come out of the doors, mount up and ride hell bent for leather out of town along the track to the east.

For some reason that made Sam uneasy.

He couldn't put his finger on it, exactly, but he just had an intuition about the payroll train and the Hash Knife outfit, and he felt like he should say something to the new sheriff who was nursing a beer at the bar.

Sam walked in, spurs jingling, Colt Peacemaker strapped on his gun belt with his green eyeshade still on his head - he looked nothing like the telegraph operators at Western Union offices back east. He looked more like a cowboy wearing a station agent's green eyeshade.

As he introduced himself to the new sheriff, he realized why he felt uneasy.

Tony Bonafidio!

Most of the operators out west knew the story on Bonafidio and his escapade out east with the bankers and his lack of trust for the privileged information he was handling over the wire in DC.

Sam had seen his face in several newspaper articles and now even with a moustache, he recognized him when he passed Sam on the boardwalk outside the saloon.

It didn't take a genius to figure out what was happening as Sam thought about a bad man with a good knowledge of Morse code and a gang of murderous thieves led by Jed McDougle and a payroll train on its way to Canyon Diablo.

Sam set his beer down and began to tell Bull Sethwood, only a few hours on the job, about his concern...

Chapter 8. The Train Robbery



The first sign that things were not going to go according to plan was the puff of smoke Jed saw from the top of the first box car behind the coal tender for the engine.

The Hash Knife outfit's blockade of the rail line by timbers and boulders had been successful - the engine was at a dead stop halfway between Winslow and Canyon Diablo.

There was no one visible on the train - which was a curiosity to Jed and mildly worrying.

Usually the engineer and fireman stuck their heads out of the cab and looked forward to see what was wrong and why - and got a warning shot or two to make it clear.

The gang had held back 100 yards to see what would happen, sitting on their horses and without so much as a bandana over their nose and mouth to hide their face.

Jed's sight of smoke was nearly instantly followed by the crack of a .45-70 and the ensuing "thwack" of the slug slamming dead-center into Rusty Wilson's chest - he was bodily picked out of the saddle and thrown backwards in a somersault to the ground behind his horse.

His hat hovered for a split second before it fluttered down on to the pommel of his empty saddle.

He had neglected to fasten his chin strap and been shot right out from under his hat.

Within seconds Buck Preskitt slid another cartridge into his Model 1873 "Trapdoor" Springfield and exhaled slowly, sighting along the rear sight which had been adjusted with a minor amount of elevation to compensate for the drop of the heavy bullet at 100 yards.

Red Musgrave was the next member of the Hash Knife gang to meet his maker before they all bolted toward the train.

This time Red's hat stayed on.

Pistols are a poor choice for a gunfight at 100 yards while riding horseback and what ensued was a blistering hail of poorly aimed gunfire from the gang. Bullets splattered against the steam engine as the engineer dove to the floor of his cab joining the fireman who was already there, quaking like an aspen leaf in the wind.

The gang split into two groups and dashed toward either side of the train which had stopped along a sharp curve with a small hill on one side.

Buck dropped down the ladder from the top of the rail car and stood on the coupling platform between the two cars and waited for them to ride alongside the train, rifle at the ready.

The sheriff from Winslow was behind the payroll car, standing on the side of a tank car full of water from Navajo Springs on its way to Canyon Diablo along with the payroll and a load of ties and telegraph poles on flat cars. KL, the Winslow operator, was in the payroll car with a terrified A&P Railroad payroll clerk from Gallup.

Armed with the rifle he picked up after the Civil War, Buck had joined the train in Holbrook and an hour later met KL in Winslow. KL still had his Navy revolver - also from the war, although he had never used it. KL was not a soldier but a telegrapher for the army, nevertheless he was not a fool and unarmed during his service.

The riders coming out from Canyon Diablo - Bull Sethwood with Prickly Pear Pete and Sam Hensel - rode into the fight from the west. They were all the posse the new sheriff could muster from the Last Dollar Saloon.

Despite the newly minted sheriff's reputation, the clientele from the saloon put their money on Jed McDougale and the Hash Knife gang and with the little time he had to stop a train robbery he rode out with Sam and Pete. Before they rode east Sam had taken the time to get on the wire and quickly telegraph what was happening to KL in Winslow. Buck also copied it on his sounder in Holbrook. As he pounded the brass Sam thought to himself, "That's probably the fastest Morse code I ever sent in my life!"

The average speed over the new A&P track was 25 miles per hour and with the estimated time for the train's arrival in Canyon Diablo they figured they could catch up in time to make a difference.

The ensuing melee found the men from Canyon Diablo dismounted and hiding under and on rail cars, shooting at the Hash Knife gang which was making it difficult to hit by wild jinking on their horses. These hardened desperadoes weren't going to give up the fight because the train had defenders - they had done this before and even though they lost a few men they always made away with the plunder.

But as is the norm for gunfights, the amount of flying lead that actually strikes someone is a small fraction of the number of shots fired.

And so it was in the Hash Knife's attempted train robbery that day.

With bullets whining and ricocheting everywhere, only a few fatal hits were scored - and it was Bull Sethwood's day to die.

As Jed McDougal rode alongside the train, leaning over his horse and firing his pistol, he came abreast Sethwood reloading his gun. Reaching around in front of his horse, McDougal fired a fatal shot that knocked Bull off the car and onto the ground, shot through the heart.

By this time, four of the Hash Knife outfit were dead and wounded and Jed decided the cost was too great to keep up the attack.

As he pulled up his horse to shout out to the others in the gang, Buck drew a bead on him from two cars away and put a .45-70 into his chest.

The Hash Knife gang saw their leader drop from his saddle and began to spur their horses away from the train.

Bull Sethwood, who had been made sheriff of the Devil's Canyon at noon, was dead by 5 o'clock the same day...

Chapter 9. The Monsoon and the Undertaker

He came in through the depot window, tempted by a silvery moon.

The door was locked for the night, but Sam had left one of the bay windows slightly open in the newly constructed station depot at Canyon Diablo. The moonlight was just right for a stealthy approach to nab some cash. Pitch dark and he couldn't have seen his hand in front of his face - full moon and it was too risky he might be seen - even at 3 AM on a Sunday morning. But a waning silvery moon was perfect for a pinch.

It was a humble shack of a station but adequate and it did hold some cash in one of the desk drawers by the telegraph key.

Jethro Hull was the Canyon Diablo undertaker and everything about him radiated his somber trade - he was tall, gaunt, cadaverous-looking with a sallow complexion and always dressed in black. The undertaker wore a stove-pipe hat like the one President Lincoln made famous.

But all of the lovable features of the President who had held the Union together - at least beloved by northerners - were lacking in Jethro Hull.

Jethro came out West to find his fortune after a harsh stint as a gandy dancer on the young railroad that ran from Toledo to Ann Arbor, Michigan. His father was from Yorkshire, England and his mother was Irish and like many immigrants of the era he found work as a section hand on the railroads of the Midwest.

The work was rough and demanding and fired Jethro's determination to find an easier way to make ends meet which, in his case, meant he would occasionally do some burgling on the side.

That's the way the thieving heart works - unrepentant, it finds itself always looking for the opportunity to steal. In fact, it *needs* to steal.

Turning from the life of a railroad laborer he fell in with a mortician he met who was fleecing the flock of a local congregation. This outwardly upstanding citizen of Ann Arbor made a fine living taking advantage of grieving families who suffered many of the diseases of the immigrant's life. Hull learned the morbid but necessary trade of burying the dead while fleecing the surviving from a master.

Pinewood boxes were plentiful in Michigan due to the rich pine forests of the north. That was, until the forests were clear-cut to build the cities of the Midwest. The trend for wooden buildings in Chicago and Detroit foremost among them. The old growth White Pine forests of northern Michigan were left behind by stumps, slash and debris on the forest floor, looking like the Civil War had been fought right through them.

After the Michigan forests were ravaged, the logging companies moved on to log the towering Ponderosa Pine of Arizona's high country and Hull moved West with them.

On that night of the silvery moon along the canyon, Hull was successful in stealing a few dollars from the telegrapher's desk drawer when the sounder began to chatter, breaking the stillness and startling him. Sam had left the wire cut in when he left the evening before and a lightning strike somewhere on the line was making itself known through the magic of induced electromagnetic current flow¹.

He looked behind him at the locked door and then stepped over the windowsill, turned back and pulled the window down then padded away in the night.

¹ Not all signals along the wire came from human effort - the most famous example of all being the solar storm of 1859 known as "the Carrington event" when telegraph transmissions were made without batteries between Maine and Boston for 30 to 90 second intervals solely due to auroral currents.

The missing cash went unnoticed by Sam - it was his petty cash stash and he actually hadn't remembered how much he had kept in the drawer. Hull was clever enough as a smalltime thief to leave a few bills and his hunch was correct when it turned out it wasn't missed.

But the thieving heart of the somber undertaker worked on him as he went about his business, preparing the dead for their last ride out to Boot Hill - the name given to nearly every cow town's cemetery named after the original Boot Hill of Dodge City - but made famous in Tombstone.

He had tasted the adrenalin rush of fleecing the flock of the church in Michigan and he craved the same thrill in Canyon Diablo.

And so, Jethro Hull decided to wait a few months and go back to the same well after a payroll on the railroad that should make Sam's cash stash grow.

He hoped.

"Maybe", he thought, "...that gunslinging lightning slinger will stash some of the cash in that drawer again and I will hook it like I did before on that night in May."

Hull and everyone else in Canyon Diablo had heard about the gunfight on the railroad where Bull Sethwood had bought it and also heard the stories about Buck Preskitt's sharpshooting and Sam's marksmanship with his Colt Peacemaker.

Sam had winged two of the Hash Knife gang and they had nursed their wounds back on the east slope of the San Francisco Peak while plotting revenge.

May turned to June in Arizona and the hot, dry high-pressure weather pattern that would eventually be called the "Four Corner's High" set up the Southwestern monsoon season. The moist air from the Gulf of California off Baja Mexico would be drawn up into Arizona and create spectacular thunderstorms over the mountains and desert creating some of the highest density lightning strikes in the country.

Sam was an experienced telegrapher and had spent enough time in the Southwest to be careful around his telegraph apparatus during storms, but he was human, and he occasionally left his wire cut in when he quit for the evening.

So it was on the night that Undertaker Hull decided to take another stab at the stash Sam kept in his drawer that the clouds built up during the day, towering above San Francisco Peak and the desert to the east of the mountain until they boiled and rose with all the energy of the heavens.

Powered by dense Mexican moisture they let loose with all the fury of hell on earth - rain and thunder and lightning that had to be seen to be believed.

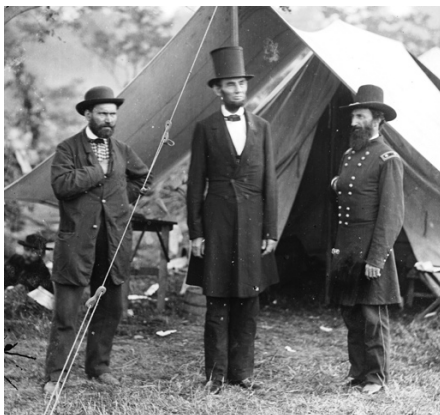
Hull had jimmied the bay window of the depot and stepped inside, carefully avoiding the telegraph sounder, relay and key. He crept around to make sure the door was locked as lightning bolts crashed and split the night sky with the brightness of day.

As he reached into the drawer that kept the cash, his hand brushed against the telegraph key at the exact moment a lightning bolt screamed out of the darkness of night and struck the #9 iron wire at the insulator where it entered the depot.

The sizzling blue bolt lit the station with an eerie glow as it traveled through the wiring of the telegraph equipment and jumped to Hull's hand, raced across his chest and flowed down to his feet which were wet from the rain.

The tall, gaunt form of the undertaker crumpled as the lightning's current passed through his body.

He slumped over the desk, top hat smoking, his left hand still in the drawer...



Chapter 10. Cadwallader J. Creswell

Cadwallader J. Creswell was born with a silver fork in his mouth.

At least that is how the Navajo people would have viewed him - "he speaks with forked tongue".

In other words, Cadwallader was a snake.

But he was a silver-tongued snake and successful investor from Boston who came from a wealthy and privileged family that came over from England shortly after the Mayflower.

His career expanded with all the entitlement and progress a Harvard graduate and Boston Brahmin could enjoy right up until he was caught in a complex business scandal of insider

trading around the postal telegraph system set up to rival the natural monopoly of Western Union.

By the time Canyon Diablo was being traversed with a trestle, Western Union had dominated the flow of messages, news and weather reporting over its substantial network of telegraph lines and operators.

The US Government would spend nearly 50 years battling the monopoly established early on by WU and one of its earliest efforts resulted in formation of competing companies in the postal telegraph system put in to law by the National Telegraph Act of 1866.

Western Union was tightly coupled with the New York Associated Press and as a result the news that was published in the east was to a certain extent controlled by the owners of the telegraph company.

Collaboration of commerce with the media and the subsequent influence of powerful businessmen and politicians was an issue created by the new technology and every ensuing communications medium since the telegraph would create similar issues throughout the history of the country.

But Cadwallader got caught out in a scandal and determined his fortune was to be rebuilt by moving West - specifically to Arizona where he intended to set himself up in the mining industry.

First, the Boston Welshman had to travel across country to take the measure of the opportunity and he planned to do so by traveling by rail as far west as he could, then explore the newly discovered riches buried in Arizona.

The Arizona Territory by the 1870's was a hotbed of mining for gold, silver, zinc, copper and lead.

And if an investor or speculator could get in early, fortunes were to be made and it did not matter who you were back East when you came out West.

Creswell was informed that he could travel as far west as an outpost called Canyon Diablo where the rail line currently ended while they finished the trestle across the canyon. Then he would have to find his way south to the mining district in central Arizona and take personal stock of the opportunities.

It fit his robust personality as a Welshman with a miner's heritage to get his boots dusty if not his hands dirty and he needed a reprieve from the mess he had been entangled with in Boston.

Cadwallader and his wife Annika had no children and his personal arrangements for the trip west were simple.

He left the details to Annika and spent his time at the Somerset - the private social club of Bostonian aristocrats that occupied the corner of Beacon and Somerset Streets - although he soon sensed the coolness of his business associates after the telegraph scandal.

Annika Creswell came from a family of old-line Boston merchants and her father had decidedly not graduated from Harvard. Born into a family of five children to a jovial and shrewd German father and a lovely Swedish mother, Annika was the oldest of the brood of two sisters and three brothers.

Their wealth was substantial, as the family profited handsomely from the fleet of whalers they had accumulated and sent to the seven seas for sperm oil which was in great demand in the middle-to-late nineteenth century.

Although wealthy, her lack of equivalent social status compared with the level of the Creswell's Boston society was obviated by her stunning beauty and graceful manner.

Blonde hair piled high on her head, dazzling blue eyes with a fine figure and delicate features made Annika Muehlenkamp the most sought-after dance partner at the debutante balls and cotillions given in Boston during the season.

Her stern German upbringing born of a family history of seafarers kept her from putting on the airs a lesser woman might have affected which made her all the more desirable to suitors.

Annika was highly intelligent which enhanced her attractiveness. She was not a flirt - in fact, she despised the art. But her grace, wit and kindness amplified her beauty to a level few women achieve, such that any imperfection in appearance - which of course there had to be - was diminished by her sweeping presence.

In a word, Annika Creswell was that rarest of women - a jewel.

Cadwallader had been watching her for several years when he finally maneuvered himself into position to win her heart and hand in marriage when she turned 21 years of age.

The wedding was the social event of Boston and had all of the best prospects for perpetuating the upper social class of Bostonian aristocracy, but as years passed it became clear there were not going to be offspring in the Cadwallader branch of the Creswell clan.

By the time the telegraph scandal broke in Boston, the Creswell's were in their early 40's and had grown apart. They remained together based on the morals of the age and for the sake of appearance.

Annika Creswell had become even more beautiful in her early 40's as some women are wont to do - she carefully hid her disappointment with their absence of children and her husband's fall from grace with a pleasantness propped up by Teutonic discipline. Despite her circumstances

Annika made every effort to maintain peace with her husband and show appreciation for him despite the coolness in their relationship.

The Atlantic & Pacific train arrived in Holbrook, Arizona at 3:15 on a Saturday afternoon after its departure from Gallup four hours earlier.

Buck Preskitt looked out the bay window of the depot as a gentleman and his lady stepped down off the rail car and turned toward the station. It was unusual to see such finely dressed travelers this far west and he knew these two had to be from the East.

Buck looked up just as Annika Creswell walked by on Cadwallader's arm. She glanced over at the front of the three-section bay window and saw Buck at his telegrapher's station.

Buck looked up - directly at her - and felt his face flush as he quickly turned back to his key and completed the message he was sending to Sam at Canyon Diablo.

He struggled to keep his mind on what he was doing as Sam acknowledged the message with the customary "Di-dit" and began sending his reply.

Buck had never seen such a beautiful woman in his life...



Chapter 11. The Telegram

Annika Creswell wrote script with a firm hand and kept strictly to the Spencerian cursive style that was popular in personal correspondence and business communications of the age. The style approached an art form with flourishes that approached calligraphy. The ability to write perfectly in this script was a sign of culture.

Her diary, studiously attended to on their travel by rail across the country, contained detailed accounts of the various natural wonders she observed - and, when the opportunity presented itself, she condensed her observations as succinctly as possible then sent off a telegram to her mother who resided with the family in a sprawling townhouse on Beacon Hill.

The trip through the mountains of the West on the way to The Arizona Territory thrilled her with their majesty and soaring heights - her spirit resonated with the raw power of this region of the country which was so different then her seaside life in Boston.

On the trip from Gallup to their stop in Holbrook, Annika condensed her latest entries in to a few pages of tightly worded prose which she removed from the back of her leather-bound diary.

Saying a quick goodbye to Cadwallader in the café she hurried down the boardwalk to the train station and walked in the door.

Buck stood up, cut out the line for the day and turned to take his jacket off the peg on the wall when he glanced to his right and saw Annika standing there in the middle of the small station, papers in hand with a disappointed look on her face.

“Am I too late to send a telegram?”

The first thought that struck Buck, other than her beauty, was that he had never heard a Boston accent.

“Ma’am?”

“I said, is it too late to send a telegram today? You look like you’re leaving, and I wanted to send this off to my family before the day is over. It looks like I won’t be able to...”

Buck had no plans for the evening that day.

Or any other day, they were all the same - an early dinner and a beer at the saloon then a walk around the town and maybe out in the desert for an hour or so, then back to his room and a book until he fell asleep.

He turned to the line and cut it back in and said,

“Of course I will. What do you have and where would you like it sent?”

Annika strode forward and handed the pages to Buck and as she did so, she realized how big the man was.

When she had seen him sitting down earlier through the window he looked like an average sized man, but standing, he towered over her.

“I would like this sent to Mrs. Marianne Muehlenkamp, 39 Beacon Street, Boston, Massachusetts, please.”

Buck looked over the pages and began to count the words, finding the count right around the average of 100 words on each of the four pages and came up with about 435 words.

“This will cost over \$200 dollars!”, Buck said with an inquisitive look.

Each word on a telegram pad cost 50 cents to telegraph to the customer. What Buck could not tell her was that when he sent the message, he would use the telegrapher’s abbreviations for nearly every word and the cost to the company would be less than half of what they charged. On the other end the operator would reconstruct the original message.

He felt bad about it but that was the pricing structure that made telegraphy so profitable.

Annika laughed, and explained that it would be acceptable since her mother had demanded detailed accounts of her trip.

Buck smiled and Annika returned a friendly smile.

Buck had never been in the presence of such a woman but found himself becoming at ease with this unpretentious female. His self-consciousness drained away as he took out his telegram pad and began to transcribe her message as the protocol required and tally the words on each page.

Standing at the counter, Annika watched as he wrote and then exclaimed,

“What beautiful handwriting you have!”

Buck looked up at her and smiled, then laughed.

“Oh yes, we’re taught to write this way on purpose so the engineers and conductors can read what we write on the train orders we receive over the wire. We write multiple copies on very fine paper and the orders must be absolutely legible.”

She could not place his accent but suspected he hailed from somewhere in the South before coming out West.

Something about this straightforward, honest-looking man stirred interest in Annika that made her uneasy.

Her experience with men, especially her husband Cadwallader and his society colleagues, had not prepared her for the down-to-earth frankness and manliness of this westerner. She was familiar with the unwanted attention her beauty had attracted since her teenage years and knew how to handle it. She was one of those women whose bearing demanded respect. But this man gave no indication of the kind of attention she did not want.

She found him - *interesting*.

Annika was not flirtatious and her Lutheran upbringing in Boston had instilled a deep regard in her for the basics of the faith - she regarded all, and especially two in particular, of the Ten Commandments as rules to live by regarding the other sex.

Cadwallader on the other hand, had grown up as a member of the old North Church of Boston - his ancestors had been part of the initial founders of the church in 1723 - but his personal perspective on those same commandments taught in Sunday School as an Episcopalian was different than hers.

He thought of them more as guidelines...

So the realization that she saw Buck with perhaps more than passing interest was troublesome to her and she meant to quash that feeling with German determination.

Buck finished transcribing the diary summary, came up with the total and presented Annika with the bill.

Annika paid the amount and then hesitated to leave the station.

"Would you mind if I stayed to watch you send the message?"

Buck looked quizzically at her for a moment then answered,

"You are most welcome to, ma'am, it won't take long. By the way, I should introduce myself - I am Buck Preskitt, the agent and operator for the station here in Holbrook."

Annika offered her hand with a smile and introduced herself and mentioned her husband, Cadwallader J. Creswell was at the café.

Buck acknowledged that and sat down at his desk, opened the closing lever on his key and began to send the message to the operator in Gallup...

GEM CITY BUSINESS COLLEGE

AND

INSTITUTE OF PENMANSHIP,

Nos. 508-509-510 Maine Street.

D. L. MUSSELMAN, Principal and Proprietor.

Quincy, Ill. Nov 14 1884
Henry Adams.

Dear Sir:—We take pleasure
in sending you by this mail, College four
containing terms of tuition board, and
full information concerning this school.

We have an excellent institution,
with a thorough and practical course of
study, elegantly furnished rooms, and
experienced teachers. Our students, on
completing the course, are eminently
successful as accountants, teachers, and
business men.

Life Scholarship is \$60, and
gives the student all the time desired to
complete the course, which usually re-
quires about six months.

We procure good board for our
students, at from \$3.⁰⁰ to \$3.⁵⁰ per week.

Hoping to receive your patronage, I am

Very truly yours,

D. L. Musselman, Prin.

Spencerian script.

Chapter 12. Apaches!

“ya-ta-hey!”

“How, white man!”

Both men broke up laughing - this was their private joke - Sam would greet Prickly Pear Pete with the traditional Navajo greeting and Pete would reply with the stock Indian reply.

Ever since Pete had used his cedar flute to play a few Morse code characters behind the canvas tent wall for Sam one evening a friendship had developed between the two.

Sam began to teach Pete Morse code and with Pete’s musical talent and natural ability he quickly picked up the art of telegraphy.

Pete was also adept at learning the railroad telegraph message protocol that kept the trains running safely and on time and was close to the point of taking the reins of the station for a short break for Sam when they fought the gun battle together against the Hash Knife gang’s abortive train robbery.

Sam was beginning to learn more about Navajo culture in the process and one of the interesting aspects of his study was how different they were from the other tribes in the Southwest.

The Apaches, in particular, were a hard and warlike tribe, and the US Cavalry had their hands full with Geronimo and his band of White Mountain Apaches who were terrorizing The Arizona Territory. Cochise had died years before and now Geronimo took his place in a most warlike fashion.

General George R. Crook, nicknamed by the Apaches *“Nantan Lupan”* which means "Chief Wolf" - a sign of respect - had been sent West to handle the Indian wars being fought in the territory and with him came the telegraph.

By that time the Army had put in place an extensive network of telegraph lines across the West so that by 1879 there were over 4,000 miles of wire including a line from central Arizona to the White Mountains at Fort Apache and on to Holbrook.

Buck Preskitt would receive daily messages from the Fort on their needs for water and supplies and in the process pick up snippets of news from the Fort on what was happening in the mountainous east and southern part of the Territory.

Some of the reports of battles and skirmishes with the Apaches were literally hair-raising.

The Navajo wars were long over by then - the tribe had endured the *‘long walk’* to set up camp in New Mexico in 1866 but the Apaches held out and were still fighting for their territory.

The great Navajo Indian Chief Manuelito would be the last to make the walk to eastern New Mexico and one of his descendants - later married to Prickly Pear Pete's granddaughter - would be Billy Begay who became a telegraph operator in Farmington, New Mexico.

Begay's daughter Jane would carry on the telegraphic tradition in the family and eventually marry a sailor of the name Nate Miller, descendant of Tecumseh, the great Shawnee Indian Chief. The two would meet at the train depot in Flagstaff at the end of World War Two.

Pete was listening to the sounder in the Canyon Diablo depot when he heard the distinctive fist of Buck out in Holbrook break the line.

As the code streamed across the wire both Sam and Pete looked at each other - what they heard was riveting.

Buck was sending on some news he had received from Fort Apache that eclipsed anything they had heard before, even including the battle at Cibecue Creek.

At Cibecue Creek west of Fort Apache the Cavalry had fought an intense battle that resulted in 28 killed and wounded - a little over half were Indians.

But now the report coming in was much closer to them - a battle had been fought on the Mogollon Rim between Crook's forces and the Apaches that had involved civilians with the soldiers and the Indians.

Buck's fist slowed down and finally came to a stop.

His report wasn't finished yet, but he struggled to get his emotions under control before he went on.

Cadwallader and Annika had traveled far and wide over the central desert valley and surrounding mountains of The Arizona Territory looking over mines and potential mining claims for their investment opportunities. They trekked into the Bradshaw Mountains, then up to Jerome and over into the wilderness of the Superstition Mountains and all the way down to Bisbee in search of gold, silver and copper.

Everywhere they went they found opportunity and Cadwallader had plans to invest his own remaining personal wealth and that of Annika's in a new venture.

The elegant city clothes of Boston had long since been put away in trunks and now they traveled in the rough and hardy clothing of the Southwest - even in western wear Annika caught long glances from every cowhand and soldier they passed.

The Creswell's were highly favored guests at the Army's camp at Fort Verde - their social graces were welcome and appreciated, especially by the officers who had come out from the East.

Visiting Fort Verde regularly made sense since it was a central point for their trips to mines around the area. A trip to Fort Apache was necessary since it was the headquarters of General Crook who had extended an open invitation for them to visit.

The route from Fort Verde to Fort Apache followed the trail eastward up the slope from the Verde valley in the desert to the high country of the territory, passing from high desert populated with mesquite, manzanita and prickly pear to scrub oaks of the high chaparral and then through the hillsides dotted with pinyon and juniper pines.

Above the pinyon and juniper rose the majestic Ponderosa Pine forest that stretched from Flagstaff to New Mexico and rose atop the escarpment that marked the change from the Sonoran Desert to the Colorado Plateau.

The view from the rim's edge of the escarpment, some two thousand feet above the high desert, extended over 60 miles - with multiple mountain peaks covered in pine disappearing in the distance.

Annika and Cadwallader were riding in a buckboard wagon with a detachment of soldiers from Fort Verde, passing under the canopy of Ponderosa Pine on the trail headed East along the rim.

Cadwallader J. Creswell never heard the report from the shot fired from an Apache warrior's Model 1873 Winchester that went straight through his neck and struck a Ponderosa Pine tree beside the wagon...



Geronimo 1887



"A Cavalry Officer" - Frederic Remington



The Mogollon Rim - Arizona photo by Bob Houf

Chapter 13. Penelope Bean



Some people enter a space and their presence sucks the oxygen out of the room.

Other's fill the room - their personality making things richer and better for everyone present.

Penelope Bean was 45 years old, single and filled a room richly and for the better - vivacious, big dark eyes, raven black hair tucked under a cowboy hat with a concho hat band and a dazzling smile.

She was of medium height with a slender figure and wore her own design of what would become known as cowboy boots - her one yield to the temptation of vanity - when she commissioned Charles Hyer in Olathe, Kansas to make her bespoke boots with the Rocking B Ranch brand on the side.

Penelope was not a loud woman - not at all - instead, she was focused, intense and many would say driven.

She commanded a room's attention because she was smart, plainspoken in a Western way and very good-looking, although she downplayed her looks - at times they got in the way of getting things done, and getting things done was what drove her.

She was **THE** celebrated cowgirl of Pueblo County, Colorado and had made a name for herself by working her late father's cattle ranch first as foreman then owner and building the spread to a herd of respectable size.

Her straightforward, no-nonsense manner made her orders clear and promptly obeyed which caused things to run smoothly on the ranch, the Rocking B her father had made famous in southern Colorado over the past 30 years.

Growing up on the ranch with two younger brothers meant she could outshoot and outride most of the cowboys on the Rocking B and she had demonstrated her skill on many occasions.

She had branded many a calf and was not averse to breaking in a new horse if she felt like it.

Penelope rode like she was born in the saddle - which she was.

She had stunned the crowds at the Colorado State Fair - which started in Pueblo in 1872 now 10 years earlier - when she rode and won several events on horseback. She was 40 years old when she competed, and she did it as a personal challenge just to see if she could do it.

All of which had the effect of turning her into a legend in the West - that is, she was the old West's epitome of the cowgirl that the western novelists back East loved to invent in their romance novels.

Except she was genuine and possessed more qualities of everything the dime novel crowd could want in a heroine - not to be believed unless they had made her personal acquaintance.

Penelope was looking for additional acreage to start a second ranch and acquire grazing land in The Arizona Territory when she got wind that an outfit was already considering a large acquisition east of Flagstaff. She wanted to see what the area was like before the future Aztec Land & Cattle operation took ownership of a million acres of prime grazing land and created the Hash Knife outfit to run it.

The Rocking B Ranch owner believed in using technology to gain an advantage. Whether it was improving the way the Aermotor windmills pumped water into their stock tanks or running a personal telegraph line to the ranch house, Penelope took every advantage to expand the size and profitability of her spread. The Rocking B was second in size in Colorado at 20,000 acres only to the SLW Ranch up in Greely and she had every intention of overtaking them.

The telegraph line was a stroke of genius. It gave her up-to-date information on the market for beef ahead of her competition and also kept her abreast of news in general, some of which tipped her off to the opportunity down in Arizona Territory.

Penelope's youngest brother Tom had picked up the telegraphic art and in addition to being an excellent cowhand, he had a fine fist on a telegraph key. He signed "TB" as his personal handle on the wire and the Ranch call sign was, of course, "RB". Their wire ran from the main ranch house to Pueblo and connected at the depot.

And there was a certain young lady telegrapher in the Pueblo depot that Tom especially liked to chat with late at night over the wire - to the enjoyment of every other night shift lightning slinger on the division who 'read the mail' on this social interaction with great delight.

Her other brother, John Bean, Jr was the ranch foreman and went by the name Jack. His nickname was "Stalk" to the ranch hands, but they kept that to themselves.

The US government had hatched a brilliant plan culminating in 1866 when they passed a Congressional Act to incentivize the railroad build-out in the west by making railroad land grants - parcels of land alternating like a checkerboard on either side of the rail line right-of-way that could be sold off by the railroads to fund their development.

The Aztec Land & Cattle Company would, in just a few years, buy a million acres at 50 cents an acre from the Atlantic & Pacific Railroad and build their herd as a result of the collapse of the market in Texas.

Penelope had Tom wire a message to the operator in Holbrook, Buck Preskitt, and request information about a place to stay and other necessities for her trip to scout the area.

Buck's mind was preoccupied with the recent death of Annika Creswell's husband in an Apache raid on the Mogollon Rim when the sounder on his desk began to chatter from station RB in Colorado...



Chapter 14. A Tale of Two Ladies...

The town of Holbrook was established in 1882 on the rail line being built across The Arizona Territory along the 35th parallel and named after the Atlantic & Pacific Railroad Company's chief engineer, Henry Randolph Holbrook.

Its location was convenient in that it was close to Navajo Springs which supplied water to the area and a point of origin for shipping freight and supplies south to Fort Apache on the rail spur that was quickly laid down.

The telegraph line ran alongside the rails to the Fort and kept Buck in touch with the goings-on of the Cavalry and their ongoing skirmishes with the Apaches. Geronimo was riding through the high country ambushing both the military and civilian population in a futile effort to drive the white man out of their land and one such attack had cost the life of Cadwallader J. Creswell. Several soldiers also died before the Apaches melted away into the forest with the Cavalry in hot pursuit.

The Apaches knew well the Ponderosa Pine forests in the high country of Black Mesa above the Mogollon Rim - this was their hunting ground where the herds of elk and mule deer roamed - and they were able to shake the Cavalry unit with ease in the draws and canyons that appeared everywhere. Once they got off the trail that had been traveled so heavily that wagon wheels had carved ruts in the exposed boulders under the pine needles and duff of the forest floor, the soldiers lost the trail and returned to the wagon and the scene of Cadwallader J. Creswell's death by an Apache rifle bullet.

Buck had handled a number of messages over the wire regarding the attack and followed with interest the plans of Annika Creswell as she sent telegrams which he relayed back to Boston on the details from her stay at the Fort. He knew she planned to return to Boston with the body as soon as she could take the train to Holbrook then depart for the East.

Cadwallader's body had been taken to Fort Apache for the military mortician to do his work and she arranged to have his remains returned to Boston for burial in the family plot. All of which passed through the #9 iron wire by telegraph from the Fort operator to Buck and on to the East.

During this time Buck copied a message over the wire from the operator "TB" up in Colorado that requested arrangement for a stay by one P. Bean, owner of the Rocking B Ranch of Pueblo for two weeks at the new hotel that had just been thrown together by the railroad. Tom Bean closed the switch on his key with a mischievous smile thinking about the reception his sister Penelope would receive when the folks in Holbrook saw who P. Bean was.

She would arrive in two days' time, so Buck sent the depot messenger boy with the message to the hotel and confirmed the availability of a room with board for the ranch owner.

KL, that tall drink of water from Amarillo and the operator at Winslow, had planned to take several weeks off and travel back to Texas to take care of family business. His sister and brother ran a cattle ranch outside of town that he was part owner in, and he was needed to resolve an issue on a deed of title to a piece of land he owned.

While he was gone, Prickly Pear Pete, newly approved as a temporary telegrapher by the A&P Telegraph Company, was going to stand in for KL during his absence.

KL dropped into the depot in Holbrook on Tuesday morning after a night in the new hotel and killed time chatting with Buck as he waited for the train to come in from Gallup. Buck casually mentioned that a rancher from Colorado, a certain P. Bean, was coming out to take a look around and he should be on the next train.

While they talked, the short line engine pulled into the siding from Fort Apache and Annika Creswell stepped off and walked on to the platform outside the station, dressed in black which offset her blonde hair now tucked under a widow's mourning cover and veil.

Nothing, not even a veil of tears could diminish the beauty of this woman.

KL glanced out the bay window as she walked briskly past and turned in to the station.

His expression betrayed his thoughts - he had a half-smile on his face until it registered that she was in mourning. KL immediately took on a somber look.

When Annika entered the depot, Buck stood to greet her and held out his hand - she grasped it in both hands and the look on her face broke his heart. He recalled the pain he had felt 7 years ago when he heard the news of the train wreck on the rail line outside his station in Arkansas that had taken the life of his young family.

An error made by the telegraph operator at the next station had allowed two trains to depart on the same line with a single track - the most devastating mistake an operator could possibly make. There was no way to call back either train which collided on a bridge over the White River in western Arkansas.

The impact of the collision was devastating in the extreme - the train coming eastbound had rounded a turn behind a high hill in a valley of the foothills of the Ozark Mountains sight-unseen by the westbound train which was approaching at 50 miles per hour. When the two trains slammed into one another at a combined speed of over one hundred miles per hour, the impact drove both engines straight up in the air - they then collapsed together over the bridge into the river below.

The freight cars on the westbound train that had left Buck's station earlier piled into one another in haphazard fashion while the passenger cars on the eastbound train carrying his family telescoped forward, crushing the inhabitants in a grizzly entanglement as the cars also careened off the rails into the river below.

It would be weeks before all the bodies were recovered from the wreck, some of them found miles downstream in the river.

Confronting violent and unexpected death was the cruelest of blows and Buck's bright blue eyes, which usually held a hint of a twinkle, clouded as a tear ran down his cheek.

Annika saw Buck's face in a new light at that moment and despite her grief - she had once loved Cadwallader, despite his unfaithfulness and moral failures - her determination to stifle what she had sensed about this man months earlier came back in a rush and was instantly crushed.

KL watched this with wonder and amazement - he could see there was unusual chemistry between this sophisticated widow and the big telegrapher of Holbrook, but he couldn't comprehend exactly what was happening.

As they stood there with clasped hands the scene seemed locked in suspended animation.

The train from Gallup came chuffing into the station and pulled to a stop in front of the depot.

In another moment the owner of the Rocking B Ranch walked into the station...



Chapter 15. The Redhead

For once in his life, KL Williams of Amarillo, Texas, was struck dumb. He lost his facility for words in front of two females and Buck.

This state of affairs was so highly unusual that he began to lose his confidence - another highly unlikely condition for KL, because he was a lady's man of the first order and had never been caught before without a finely tuned comment or compliment when it was appropriate.

But having witnessed the scene with his friend Buck and the widow Annika Creswell unfold in front of his eyes, the appearance out of the clear blue of Penelope Bean in the small depot at Holbrook took him by surprise - he was indeed at a loss for words.

It had been over a year since KL had seen a respectable woman - and a good-looking one at that - and now he was in a small depot with two!

Sure, he had seen Sawtooth Sally, the owner of the saloon and dancehall in Winslow and her bevy of girls - Annabelle Grace being the best of the bunch - but they were of a different sort and not close to the class of the two women he now faced.

Penelope Bean, owner and operator of the Rocking B Ranch in Pueblo, Colorado took command of the situation immediately.

"Howdy. I am Penelope Bean and I run the Rocking B Ranch in Colorado. I would like to know where the hotel is - I'm supposed to have a room there according to my brother who made the arrangements."

All eyes were on her as Buck and Annika stepped back from one another and sized her up.

KL had already done that, and he liked what he saw.

Buck started first.

"Welcome to Holbrook, ma'am, I'm Buck Preskitt the operator here and this is Mrs. Annika Creswell, just come up from Fort Apache. I was on the wire to your brother, I guess, but we didn't expect...", his voice trailed off.

Penelope reached out and they shook hands as KL finally found his voice.

"And I am Ken Williams from Amarillo - folks call me KL for short."

Penelope smiled at that and shook his hand, thinking to herself, "Nothing short about this fella - he has to be over 6 feet tall..."

But all she said was, “Well, glad to meet you all and if you can steer me to the hotel I will get on with business.”

KL then proceeded to volunteer his services since he had stayed there the previous night and could walk her right on down - and he could also have her luggage brought down by the station messenger boy.

Penelope mulled over this helpful tall Texan as they left the office.

She didn’t mind his going along; it had been a long slow train ride down from Pueblo and she could use some company to get to know the area - and hopefully something about the plans of the Aztec Land & Cattle Company.

Buck asked Annika if she would like to sit down but she declined. She needed to get something to eat at the café before the train left in the afternoon.

Buck could not leave the depot for another two hours due to telegraph work, but he promised he would join her at noon.

As soon as Annika left the station, Buck sat down at his desk, slid the closer open on his key and tried to raise TB at the Rocking B Ranch in Colorado...

————— — — — —————

The night before, Tom Bean had been on the wire to Pueblo station “SB” and he was chatting with Sara Elizabeth O’Sullivan, the night shift operator he had taken a fancy to.

“wd lv to c wt hpns wn pb in tt podunk tw’n”, Sara who signed “SE” sent to Tom.

“hi hi c wl hr abt fer sr”, came back at 20 words per minute from Tom.

“hi” was the code abbreviation for the telegrapher’s laugh and they both thought it was a great gag to play on the folks down in Holbrook - that podunk place just built on the railroad going across The Arizona Territory.

What Sara Elizabeth had sent to Tom was, “Would love to see what happens when PB in that podunk town”. Tom had filled her in on the joke and Sara, who knew Penelope well and liked her, thought the spoof was splendid.

Tom had replied, “Ha ha, confirmed, will hear about that for sure” in his abbreviated reply.

Their chat kept on until Sara had to clear traffic for a train order coming through the station.

She had often thought about switching over to the Western Union day shift because it paid better, but if she did that she would no longer be able to work Tom out at the Rocking B Ranch in the evenings.

Tom had first made the acquaintance of Sara when he put the line in from the ranch house to Pueblo. He hadn't actually met her person-to-person, but when he began to telegraph from the ranch his fist was slower than she was used to working and she made fun of him.

In fact, Tom didn't know she was a woman which made for great fun when she started to poke him about his skill and get him to rise to the bait.

Tom's code speed rapidly built up and he was able to keep up with her as he handled commercial traffic on the cattle market which she felt uncomfortable handling since it really ought to have been routed through the Western Union branch.

But her interest in baiting Tom kept her attention until one day she called him a "lid" which meant he was an unprofessional operator in code abbreviation.

Tom had enough - that got under his skin to the point that he decided to get on his horse and ride into town that night and have it out with this testy operator, "*mano y mano*".

Tom had inherited his father's short fuse of a temper and once lit, there was sure to be an explosion.

What happened *was* an explosion - but more of a passionate type.

Tom tied his horse off at the rail in front of the Pueblo station and stormed into the office.

He looked at the bay window where the telegrapher desk was but saw no one. He turned around to see a pretty young woman with fiery red hair and vivid green eyes standing in the corner with a broom in her hand, staring at him with some alarm.

When Tom got riled up, his face flushed and his dark eyes sparkled - with his hat pushed back on his head and his hands on his hips, he demanded, "Where's the night shift operator?!"

Sara Elizabeth pulled herself up to her full height of 5 feet, held the broom across her breast like a rifle at port arms and demanded an explanation.

"Who are you and why are you yelling at me?!"

Tom looked surprised - he glanced around the station and realized they were the only two in the room.

"You're... you're not SE are you?"

Sara Elizabeth instantly realized who this was and glared at him long enough to see him back down and begin to shrink before her.

This was delicious, she thought, "He is handsome beyond what I imagined, taller than I hoped and he has beautiful dark eyes!"

Sara walked right up to the six-foot-tall Tom, looked up at him and smiled a sweet smile.

"Yes, Tom Bean, I am. Would you like to introduce yourself to me properly now?"



Chapter 16. Revenge



Slim Wickham nursed a grudge like an itch that could not be scratched.

He slapped shut and spun the cylinder of his revolver again, watching the bullets spin as it clicked around - thinking of what had happened on the train robbery that had cost Jed McDougle and another Hash Knife bandit their lives.

"It shouldn'ta gone that way, not at'all...", he muttered under his breath as he stoked the pinyon pine cinders in the fire under his beans. The fragrant aroma of pinyon pine mixing with the beans made up in his special sauce of brown sugar, mustard and a dash of whiskey made his and the other's stomachs growl.

He had built the fire up in the stone ring to keep himself and his pards warm and had made a smaller fire off to the side where the grate held the pot of beans and the coffee simmered.

Bacon and beans with some cowboy coffee would be good for supper and always welcome as the nights turned cooler on the side of San Francisco Peak. Their hideout was in a cave in the trees well below the tree line. Signs of grizzly bear in the cave before their time were still present and they kept an eye out in case one should come back and sniff around. Most of the bears had

moved on down to Sycamore Canyon and they should be putting on fat for the coming winter - no one had seen a grizzly for a few years around Flagstaff and the mountain.

But you kept your eye out nonetheless because you just never knew about bears.

Especially grizzlies and most especially at night.

No law man had ever had the nerve to ride this far up the mountain in pursuit of the gang - at least not so far - but it would soon enough be time to ride back down to Canyon Diablo and hole up there. The nights were turning chilly and the stars began to take on that cold, hard, flinty look in the clear air at their high altitude.

The rut was almost over, and the elk had already begun to migrate down to their winter pastures in lower elevation. The frost on the ground outside the cave was getting thicker by the day.

It had already snowed a few times as the weather pattern had shifted from early Fall and it wouldn't be long before the mountain received the first heavy snow that would seal in the cave.

It had been months since the train robbery fell apart on them and they had high-tailed it out of town like they usually did after a heist. It wasn't long after that when they heard in a saloon in Flagstaff that a sheriff had been killed in the gunfight.

They barely caught the news out of the cowboy's mouth when the outfit finished their drinks and left slowly, one-by-one and met up at the hideout.

They held a powwow to determine the plan now that they knew they were wanted for capital murder of a lawman, which even in a remote territory in the West carried with it swift justice - a quick drop and a sudden stop at the end of a rope.

But Slim was the leader of the gang now with Jed dead, and he wasn't worried about hanging - not at all.

In fact, his pugnacious nature was hankering for a fight and he aimed to have one - outcome be damned.

Jed had been his closest friend and he would never quit picking that scab of the sorry affair of the muffed train robbery.

A plan emerged to move on down to Canyon Diablo and take stock of things - see what was happening now that they had been out of sight for months - and try to look up a few of those gunslingers who had given them such a bad time on the railroad.

Truth be told, they had murder on their minds, and they didn't give a hoot if there was gold or booty in the deal - they plotted simple revenge and they agreed that the first object of their hatred was the lightning slinger, Sam Hensel, telegraph operator at Canyon Diablo.

Another one at the Canyon was the Navajo that went by Prickly Pear Pete and they planned on leaving him eating dust, too.

And if they got really lucky, they would figure out a way to kill Buck Preskitt, that sharpshooter that masqueraded as a station agent in Winslow who had killed Jed. They had noodled out all the ones who had stymied their hand at the robbery and they planned to kill them all, but *especially* Buck Preskitt.

Red's brother Bob had caught one of Sam's slugs in the arm and it was just now healing to the point he could use it without pain. Fortunately for Bob the bullet passed through flesh and missed artery and bone otherwise Bob would have likely never made it back to San Francisco Peak alive.

Supper was finished, the fire died down and the ashes glowed a pleasant soft red in the fire ringed by stones as the outfit wrapped up in their bedrolls and pulled extra blankets over them for the night.

The horses were picketed on a highline, each of their lead ropes secured with a taut-line hitch outside the cave entrance. They made an occasional click as their hooves struck rock until they, too, settled in for the night, their breath condensing in slow little clouds in the clear night air. A light breeze blew down off the mountain, dropping the temperature steadily as night wore on.

The first sign of impending excitement was at 3:10 AM when the lead mustang of the little herd outside the cave whinnied in terror and jerked at the lead rope to its halter.

With a snort then a thrashing of brush a magnificent silver tip grizzly came out of the brambles downwind from them and charged the horses.

The mustang did its best to defend itself and reared up as far as the lead line allowed but the bear had the advantage and knocked the beast to the ground with a mighty blow from its paw.

What size bear would it take to knock down a 16-hand stallion with one blow?

The grizzly was sinking its teeth into the neck of the horse when Slim appeared at the cave's mouth with his rifle and fired a shot into its head, missing the brain but blinding the bear in one eye.

The bear lifted its massive head and despite blood streaming from its face it caught the glint of the rifle barrel in the moonlight and charged Slim.

Slim had levered another round into his Winchester and firing from his hip sent this one straight into the nose of the bear which now had reared high above his head with an ear-splitting roar of rage and pain.

The .44-40 slug went straight through the bear's brain as it collapsed forward - shot dead - pinning Slim to the ground under its weight.

Wickham's last conscious thought as he passed out from the blow was that his plan to kill Buck Preskitt would have to wait...

Chapter 17. Mustang Sally



Of course, she could ride.

That's why they called her "Mustang" Sally - the brash, bronco-busting 25-year-old, strawberry-blond whirlwind with a personality so outsized no one in Pueblo County could forget her once they saw her.

And everybody had heard of her.

She rode hell-bent-for-leather across town, curls streaming out from under her hat, leaning forward in the saddle on her Andalusian - a bay stallion that matched her hair - pulling up in front of the town square, rearing her horse up and prancing on its hind legs in a tight circle.

She did everything but pull a pistol and fire it in the air - which was frowned on in Pueblo. That kind of thing had died out years earlier as the town grew, adding a church and a few more solid establishments that contributed to the peace and quiet.

A flamboyant entrance by Sally so as to gain maximum attention from all the people in town was put on about once a week when she came in from her father's ranch.

She made it a point to dance her stallion.

Actually, Sally's nickname of "Mustang" was a misnomer - her horse was a true Andalusian, not a wild mustang - although the name fit Sally well.

She would start her mount slow-walking, then rear with forequarters high above ground, right in front of the Pueblo railroad station where she knew Sara Elizabeth O'Sullivan was now working the day shift.

News of the relationship that had sprung up between Sara and Tom Bean spread like wildfire through the county - at least every young woman of marrying age knew about it quick as lightning - because the elusive Tom Bean was the most eligible bachelor around. He had stayed single to the age of 35 when he met Sara one night in the train depot telegrapher's station. It was clear his status was probably going to change soon if things kept progressing the way they had been.

But Mustang Sally had decided that she wanted Tom for herself and she didn't give a hoot about Sara Elizabeth's connection with him - by telegraph or any other means - and she wasn't going to give it a moment's rest.

Tom was busy with work on the ranch - he rode and mended fence line with the other cowboys, herded cattle, kept the books for the ranch and somehow found time to keep in touch with Sara by telegraph.

He tried to get into town as often as possible, although the 15-mile ride took a big chunk out of his day and he did not visit as often as he would like.

So, on the Friday that he managed a quick trip into town to drop by the telegraph office to see Sara it happened to be the same day Mustang Sally came into town and danced her horse up to the hitching rail where Tom stood, watching.

Tom tipped his hat, "Howdy, Sally" with a pleasant smile.

"Howdy, Sally' - that's all I get, Tom Bean?!", fired back Sally as she sidled her horse up to Tom and slid off the saddle to face him.

Mustang Sally was not a small woman - she stood 5 foot 9 inches tall and had a full figure that she made sure a man wouldn't miss.

Tom, sensing danger and clearly attracting attention he did not want, started backing up beside the hitching rail - his spurs caught and tripped him on the first step to the platform, falling in a heap on his backside.

Sally thought this was uproariously funny and reared back, a throaty laugh welling up and echoing into the station where Sara sat at the operator's desk, copying code for a train order.

She acknowledged the order and finished writing the Form 19 then turned around at her desk to see Sally helping Tom up from the platform with both hands and pulling him toward her.

The sounder started clattering away again and she had to turn back to the work at hand, but she was flustered by what was going on out front and she missed the first several words being sent.

She had to break and ask for a fill.

The other operator noticed the request with a raised eyebrow - Sara was known for being an excellent lightning slinger and rarely had to ask for a fill.

Tom dropped Sally's hands and, embarrassed, nodded to her with a wry expression on his face and turned into the station.

Sally, well pleased with the event, laughed as she strode to her horse, put one boot in a stirrup and swung up in one fluid motion on her horse and reared the Andalusian in a farewell salute to Tom who was standing by Sara - who was studiously avoiding him.

"Sara, that wasn't what it looked like...", Tom began to say as he noticed her fair Irish complexion turning a shade of red that matched her hair.

"Just what was that, then, Tom? I have seen that girl dance that horse past me every week for a month now and I am getting very tired of her and her games!"

Tom waited a minute to let her cool down as the sounder started up again and she turned aside to copy the message.

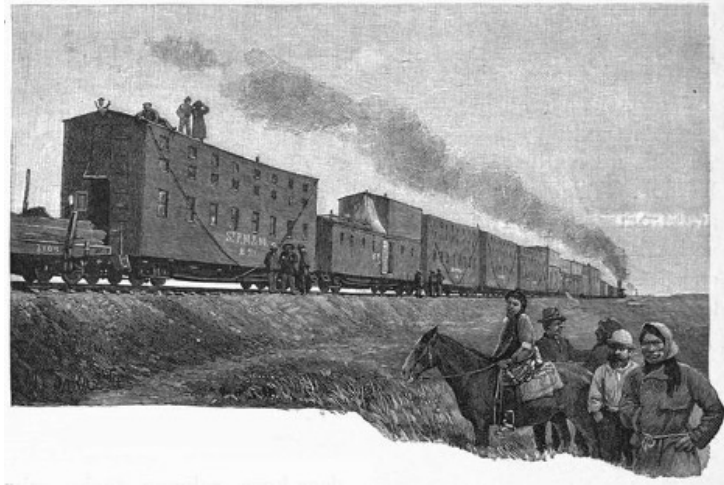
Tom sat on the chair across from her desk, watching her concentrate, noting how her freckles highlighted a cute, upturned nose and waited until the traffic was cleared - and, most importantly, her fair skin return to its usual luster.

He then explained the situation out front and moved the conversation to his reason for coming in on a Friday at noon.

"I would like you to come out to the ranch this Sunday and have dinner with us so my brother Jack can get to know you better. Penelope is down in Arizona Territory for another week, but you already know her, and I think it would be good for you to meet Jack."

Sara thought that over and her heart began to beat faster as she contemplated the meaning of getting to know his family - what remained of it, since the Bean's mother and father were both dead - and what it portended...

Chapter 18. Requiem for the Lost



Prickly Pear Pete and Sam were having a beer after dinner in the Last Dollar Saloon in Canyon Diablo.

“Well, Pete, I figure when they finish the trestle in a month or so I will ooze on over to Flagstaff and see if I can pick up a trick in the depot - maybe as a night operator. If that doesn’t work, I reckon I’ll just keep movin’ on - work myself over to Ash Fork, maybe even Needles.”

Canyon Diablo was about to become extinct.

It was little more than a semi-law-abiding outpost that had survived itself for nearly 18 months while the trestle across the canyon was being built. It would have pulled up stakes 6 months earlier, but the iron works had to be modified out East and shipped back to the canyon to cover a mistake made in the drafting department that caused the bridgeworks to be too short to span the canyon.

Pete thought about that and with customary Navajo reticence for a word too hastily spoken he waited through the remainder of his beer - half full when Sam finished.

A full ten minutes later Pete volunteered that he would be headed East - he thought he could find work as a telegrapher in Gallup, in the Territory of New Mexico. He knew the operator there and had put out a feeler as to whether they would consider him as a potential lightning slinger and they had given him a good response.

The operator in Gallup remembered his work when he took over for KL in Winslow months earlier when the tall Texan had taken a few weeks off to go back to Amarillo on family business.

It had been kind of a running joke that maybe KL wouldn’t be returning after he met a woman who ran a ranch up in Colorado and had fallen for her in Holbrook on his way to Texas.

But KL's attentions weren't returned by the Rocking B Ranch owner - Penelope Bean - who had other conquests on her mind than finding a man.

The two days in Holbrook that KL hung around while trying to establish himself as a suitor made for a good laugh by the locals and eventually resulted in a humbled KL moving on.

The blow-by-blow account of KL's infatuation with Penelope was covered in detail by Buck along the wire and operators from Gallup to Canyon Diablo kept up with the short-lived entertainment as it unfolded.

Buck shook his head in wonder as he watched KL make a fool of himself trying to win Penelope's heart, but she was as transparent as the night sky in a desert winter and gave him no reason to persist in his efforts.

It was the first time in KL's life that he had not made a dent on a woman he had taken a fancy to and he did not give up easily. But by the morning of the third day he realized even he was not going to be the one for Penelope and he hopped the afternoon freight to Gallup for Amarillo.

Buck himself was also conflicted in matters of the heart although he had taken great pleasure in watching KL's efforts.

He had had a serious talk with Annika Creswell before she left to return to Boston for her late husband's funeral and they agreed they had genuine mutual affection and interest despite the short time they had seen one another - but there was no foreseeable way for a relationship to develop further. And they were too sensible to do or commit to anything hastily.

So, he had seen her off that afternoon - Annika with her husband's remains on the train and Buck with his hat in his hands and a pain in his heart.

He could not help feeling that someone he had been destined to meet had just departed from his life amid the plaintive whistle of a steam engine disappearing across the desert.

Annika sat on the seat of the train - eyes closed, hands folded and fought back tears.

Slim Wickham had woken up with an awful headache and a massive grizzly bear on top of him outside the mouth of the cave, its bloody face on his chest looking at him with one eye blown out and the other one frozen in a death mask of rage.

His head still groggy from the blow it took when the bear fell on him, he almost screamed before he realized the bruin was dead and he was safe.

He shrugged off the beast and rolled away from the carcass as his partners came running out of the cave with a burning torch and their guns at the ready.

His ribs ached and likely a few were broken but he staggered to his feet and cursed the bear thoroughly as his gang looked on in amazement.

His horse was dead - halter still tied to the lead rope on the picket highline.

It would not be daylight for another three hours, so the outfit left the bear to be skinned until morning and returned to the fire where they broke out a bottle of whiskey and passed it around - Slim taking more than a fair share when it came to him.

"Boys, we are going to get out of here as soon as we can - let's go to the Canyon and do what needs to be done..."

Chapter 19. The Last Gunfight

The Flagstaff depot's messenger boy, Billy Yazzie, was a nephew of Hosteen Pete from Canyon Diablo and as one born to the Bitter Water clan, he kept in touch with family goings-on.

That is how the news that the Hash Knife outfit was riding again with murder on their minds to Canyon Diablo became known and passed ahead of the riders.

When Slim Wickham's horse was killed by the grizzly on San Francisco Peak it meant a ride into Flagstaff to the stables where he could find another mustang.

The stable boy was a good friend of Pete's nephew and once he overheard their plans being discussed he made straight for the train depot and Billy Yazzie.

"PJ" the Flagstaff operator heard the boys out and after he gathered his thoughts, he began to call Sam in Canyon Diablo on the wire.

The ensuing chat at 20 words per minute did not take long to give Sam and Pete fair warning that by sundown the 5 riders of the Hash Knife gang would be in town gunning for them.

Sam immediately sent a message to both KL in Winslow and Buck in Holbrook with the news that there was undoubtedly going to be a fight with the Hash Knife gang which brought both of them - at risk of losing their jobs.

Buck and KL handed their telegraph keys over to the youngsters who had been learning the trade at their elbow and boarded the afternoon train running out to the canyon with the final materials needed to complete the trestle.

There were plenty of occasions of a dire nature when young ones picked up the telegraph key and kept trains running when a station operator was missing - oftentimes it would be the young son or daughter of the agent who would stand in at time of sickness or accident - but this would be one of those times that was unique - it was due to a gunfight in the Arizona desert.

KL stepped up on to the train and Buck extended his hand to welcome him aboard.

They reminisced over the train robbery where they had fought together the last time and lamented that they had to face the same gang of bandits again - this time in a fight for their lives with no gold to be protected and no train for protection.

And this time there would only be the four of them - Sam, Prickly Pear Pete, KL and Buck - to handle the Hash Knife riders.

True to the nature of the inhabitants of Canyon Diablo, they could not expect to find anyone who would back them in that rabble, including the pathetic excuse of a stuffed-shirt sheriff who had been hired but lacked backbone.

The sheriff's lack of courage was only exceeded by his taste for cheap whiskey at the Last Dollar Saloon and Sam and the others knew better than to go in there looking for help.

The best they could hope for was that there were no sympathizers in that motley crew who would side with the Hash Knife gang against them.

Five riders trotted their horses into town from the south - the easiest way across the canyon was miles below the trestle and as they approached the train depot, they fanned out abreast.

The sun was setting, and the reddish orange glow of the evening gave the scene a warmth that none of the men felt.

A light breeze was blowing from the west and Buck watched carefully as the creosote bushes shimmied in the air near the horsemen, judging the windage he would need to correct as he aimed.

Buck was lying prone on the roof of the water tank by the tracks, his Trap Door Springfield and a box of cartridges beside him with the rifle barrel resting on a rolled-up pair of old overhauls he found in a shed by the depot.

It reminded him of years earlier when he went through the same deadly ritual during the Civil War.

He flipped up the rear sight and adjusted it for 200 yards and waited for them to come in range, choosing the man leading in the front - he figured the odds were good that he was their leader.

He was right.

Slim Wickham was carrying the same Winchester he had used to kill the grizzly and he planned to kill Sam Hensel the same way.

KL, Pete and Sam were positioned along the station and waited, unable to distinguish the riders from their vantage points but ready for the fight when it came.

Buck took a deep breath and exhaled slowly, waiting until his breath had almost expired and his pulse rate had slowed down, aimed for the center of Slim Wickham and squeezed the trigger.

It took a fraction of a second for the bullet to strike Slim and drop him out of the saddle and within three more seconds Buck aimed for the man on his right and dropped him.

The remaining three Hash Knife cutthroats split to the sides and spurred their horses to close on the depot, not sure where the fire was coming from, but shooting wildly into the windows of the station.

This time they did not cut and run.

With the furious riding of the remaining men Buck could not fire accurately and he quickly dropped down the side ladder from the tank to the ground.

Bullets flew everywhere in a rapid exchange of gunfire - two more of the Hash Knife gang fell to shots from inside the station and the third gunman was knocked out of his saddle by Buck swinging his rifle into his face as his horse rounded the back of the station.

Pete was on him in an instant with his tomahawk and it was over.

Epilog

Sam was the only casualty with a bullet hole in his left shoulder for which he was grateful the rest of his long career - he lost mobility in that arm but it left his right arm in good shape and he continued pounding brass until he was 82 years old, finishing his years in Needles, California.

Prickly Pear Pete moved on to New Mexico and eventually worked his way on to the town of Farmington when it sprung up along the railroad.

KL wound up in southern California, enjoying the fine weather and the other nice things that region had to offer.

And Buck went back to the little depot in Holbrook to relieve the young man who had taken over the telegraph desk for him during the last gunfight.

There was a telegram waiting for him from Boston...

The End



“The Perkinsville Station”

Chapter 1. Mac

“Mac” McLoughlin unlocked the station door and, as usual, had to lift up and pull hard to get it open.

During the humid summer months of the Arizona monsoon along the Verde River valley the door jambs of the Perkinsville ranch station expanded in the heat and humidity which made the door stick - sometimes so much he wondered if he wouldn't destroy it trying to get it open in the morning - which was a distinct possibility since Thomas Fitzgerald McLoughlin was an unusually large man, descended from the Vikings who once ravaged his ancestral home of Ireland.

Finally pried open it stayed that way all day long until the sun set and the last train load came out of the mine at Jerome when he closed and locked it for the night.

With the door and windows as wide open as they would go, it was still stifling hot in the little depot during the heat of the day and he often wondered why he had taken this job.

“Why am I here?”

The question rattled around in his mind until the answer came back - quietly, softly - a still voice he could almost hear, as it always did when he began to get anxious about staying in the same place for too long.

“Trust me.”

He was tempted to harrumph but he checked himself just in time to quiet the complaining spirit he inherited from his father - which he had grown to dread in the short 13 years he had been at home before the mine accident that made him an orphan in Gallup, New Mexico.

Mac hated whining. Especially his own.

Born with the fair skin and red hair inherited from his Scandinavian forebears mixed with dark brown eyes contributed by the ladies of Spain who showed up in the family tree from time to time, Mac was large for his age and a quick learner. He was able to find work in Gallup due to a friend of his father's who knew that Mac was not destined to go into the mines.

Bart Winthrop and Brian McLoughlin had shared many a pint at the end of a day's work at the Gibson Mine and Bart had listened with keen interest to Brian's thoughts about his only son's future.

Rather than disappear into the bowels of the earth every morning to labor underground with pick and shovel mining coal by hand, Brian had higher hopes for his son and Bart had to agree.

Black lung was just one of the dangers that miners faced - if they lived long enough to suffer from it without dying first from a cave-in, fire or gas leak.

The first of the coal mines in the Gallup coal field, the Gibson, was put in during the build-out of the railroad that came through the area in 1882.

Brian McLoughlin had come west from a rural county in Illinois in 1888 - a coal mining community where rumor had it, he either knew too much or was possibly a witness to a murder that gained notoriety and with that possible retaliation if he stayed put.

He didn't remain long before he fled with his young wife on a train that departed Illinois for as far west as he could afford to go with the goal of finding work in the mines. The ticket money ran out in Gallup, New Mexico where he signed on for \$10 a day for six full days of backbreaking work deep underground.

Mac was born three years later to a mother who died in childbirth on a stormy night in a shack in Gallup, assisted by an Indian midwife who stole away with the newborn - desperately afraid she would be blamed for the death of Betsey McLoughlin.

In the confusion and chaos of the ensuing trauma the midwife returned baby Thomas the next day as Brian McLoughlin, newly widowed and a new father, struggled to put his life back together.

To keep little Tom, who soon became "Mac" to his father's friends, out of trouble, he was cared for during his younger years by Kai, an intelligent and winsome young Navajo woman who taught him Indian culture along with the three R's - reading, 'riting and 'rithmetic, which she learned from members of the Dutch Reformed Church - the same group that would later start mission schools for the Navajo and Zuni tribes in the area.

In addition to English, Mac also picked up Navajo from Kai. She took a shine to the little guy and brought him along with her to the dances held during the ceremonial powwow each year - he stood out with his red hair, but they accepted him as a guest with Kai alongside. She was the object of every young single buck that saw her, and Mac was a convenient excuse to stave off unwanted attention.

He grew up playing with his friends along the train tracks that ran near their ramshackle house and he soon learned to distinguish the various engines and their purpose as they plied along the switch yard in Gallup. In addition to the coal trains there were the bigger engines for the Atchison, Topeka and Sante Fe line that ran out West.

If ever a boy was born into the railroad world it would be Mac McLoughlin of Gallup, New Mexico. His father studiously kept him from the mines and the underground world that enveloped so many generations of miners in the eastern United States and that meant he steered the boy toward the world of rails.

In his younger years he never failed to enjoy the excitement of looking up at the engineers in their cabs and pumping his fist up and down to see if they would blow the whistle on their engine, billowing clouds of white smoke puffing from the massive steam locomotives.

He was rarely disappointed. Mac was a well-known and liked rail waif in the switchyard and the engineers kept a careful watch out for him as he skipped and ran along the rails, dodging the yard boss who worried about his safety.

But it was the allure of the telegraph in the station that eventually caught his fancy and he began to hang around the little depot as much as he could - sweeping out the place and filling the hammered brass coal scupper for the stove when it ran out. Mac was intrigued by the battered and dimpled finish of the brass and began to shine the scupper when he ran out of other errands to do for the operator. He was fond of brass but left the station's spittoon alone.

He soon began to listen more carefully to the Morse code being copied and sent on the sounder by the bay window and after a month or so he began to distinguish one character from another. He did not know what they meant but he could clearly catch each letter, number or mark being sent and he could tell by the slight pause when a word ended and the next began.

"If I only knew what each of those sounds meant...", Mac was thinking as he paused in his sweeping and cocked an ear toward the sounder.

Bart Winthrop, call sign "BT" for his first and middle names - Bartholomew Thomas - glanced out of the corner of his eye and noticed Mac keenly listening to him send code. As he pounded the brass key to acknowledge a train order, he reached into a desk drawer under the table with his left hand, pulled out a sheet of paper with the American Morse code on it and handed it behind his back to Mac.

"Here, kid, take a look at this tonight and come see me tomorrow afternoon at about 5 o'clock".

Mac grasped the sheet of paper in his hand and his 14-year-old eyes lit up like sparklers.

"Thank you, Mr. Winthrop, thank you!"

"Go on, git outta here!", growled BT as he hid a smile and kept sending code at 20 words per minute...

AMERICAN MORSE CODE		
A ..	N --	1 .---
B -...	O . .	2
C . . .	P	3
D ---	Q	4
E .	R . .	5 ---
F ...	S ...	6
G ---	T -	7
H	U ---	8
I ..	V	9
J	W ---	0 —
K ---	X	
L —	Y . . .	
M --	Z . . .	

Chapter 2. Mary Bean

Sunset in the canyon came on slowly, the line between shade and sunlight drifting up the canyon walls as the temperature dropped a few degrees.

A bald eagle sailed lazily on a thermal above the sheer cliff face, circling before coming in for a landing on its nest, high above the Verde River. The fishing was good in the river and occasionally a tasty morsel of river otter padded a diet of trout. Eaglets liked the trout, but the adult eagle ate the smaller otters, except the tail - they always left the tail.

Dried bones of otters rained down from the nest over time and clicked against the stones of the cliff as they tumbled down into the canyon below.

The whitened little bone fragments littered along the game path below the cliff confused Mac until one day he saw the male eagle swoop down and pluck an otter from the water - both of

them struggling as the massive bird of prey slowly gained altitude and with powerful flaps of its wings lifted the otter high above the river and on to the nest.

Mac watched them every evening, circling over the heights, wondering what it would be like to be up there - free as a bird, without a care in the world.

He slapped the harmonica against his forearm and blew through it a couple of times in the key of G, then began to play the same song he always started with - a Spanish number with lugubrious notes, rich in the somber, melancholy mood that sometimes came over him, out in the desert of Arizona away from the towns and their cares.

And away from Mary, the daughter of Tom and Sara Elizabeth Bean of the Rocking B Ranch of Pueblo, Colorado.

Mary Bean, born in 1884, was 7 years older than Mac McLoughlin but the difference in age was immaterial. They had met and fallen in love within the first week of their introduction when Mac visited the ranch on an invitation from the Beans, prompted by Sara.

She had taken over the management of cattle sales for the ranch after Tom finally got around to proposing marriage and within a year Mary was born.

Sara's skill in business management combined with the telegrapher's art ensured the Rocking B Ranch would continue to enjoy excellent margins over the competition and true to the dream of Penelope Bean, owner, the ranch grew to become the largest cattle operation in the state of Colorado - eclipsing the SLW up in Greely.

The idea of starting a second ranch in Arizona never materialized and all of the capital that would have gone into competing with the Aztec Land & Cattle Company was funneled into development of the Rocking B in Pueblo County.

The fact that Sara used the telegraph station at the ranch to communicate with the beef market buyers gave them an advantage that not even the scale of the Aztec operation could overcome, despite the fact their spread was a fraction of Aztec's size. Penelope now favored profitability and cash flow over market share or mere size and had learned to be content with what she had done with her father's modest ranch.

That is, as content as a woman of Penelope's driven nature could be.

There would always be another challenge in her life and so far, she had managed them all as a single woman, although that would change in a most remarkable and unexpected fashion.

Mac had learned the telegrapher's trade in Gallup, working alongside Bart Winthrop and had turned into a first-class operator. He was competent as a night shift lightning slinger by the time he was 18 years old and at 21 he was being considered for a dispatcher's position on the division.

That was his ambition and with the new relationship that had developed in his life as a result of a visit to the Rocking B Ranch his future looked bright indeed.

Mac had been on the wire handling train movements for a while when he came across the telegraph traffic on cattle movements from Arizona to Colorado. The Rocking B was purchasing heifers to increase their stock from the Aztec brand and Mac was aware of the message content as it passed through his station in Gallup.

He was only slightly paying attention until he read the mail on a chat between Sara and the operator in Holbrook, "KL" who had asked about Tom and their daughter Mary after they exchanged messages for the Aztec outfit.

KL had met Penelope years back and although they parted ways cordially - too cordially for KL's liking - he had moved West and spent a few years in San Diego after working as the agent in Winslow.

But he had tired of the coast - being from West Texas - and had returned to the high desert to take over the station operation in Holbrook from Buck Preskitt who had moved on with a certain lady from Boston.

KL had never let Penelope too far out of mind, and he made an effort to keep up with the doings of the Rocking B Ranch as the years passed, by careful attention to telegraph messages from the ranch to the Aztec operation.

So, when the sounder began to chatter with the news that the Rocking B wanted to buy heifers his ears perked up and he added a casual social comment to Sara over the wire. He sent greetings to Penelope from "an old acquaintance from Arizona" and wondered if she would remember him.

Everyone in the Southwest had heard about the shootouts at the OK corral with the Earp brothers in Tombstone as well as the fights in Canyon Diablo with the result the gun-slinging lightning slingers had become part of the legend of the Old West. Their gunfights had been written up, embellished and sensationalized in dime novels for years.

Mac had heard these stories from Bart as a teenager and wondered if any of them were true - they seemed so outlandish that he discreetly reserved judgement - he found them fascinating and a bit farfetched although Bart swore they were as true as the day is long.

But now Mac was listening to one of those very men on the wire, KL, who had actually *been* in the gunfights and he was copying Sara telling KL about her daughter Mary and her latest escapades on the ranch.

Mac paid careful attention to the chatter, brief as it was, and as he did, he thought he would like to know more about this young woman - Mary Bean.

For some reason he couldn't quite grasp, she sounded - *intriguing*...



Chapter 3. Sante Fe

Edgar T. Lake was the Chief Engineer of all communications for the Sante Fe railroad - he had led design of most of the telegraph systems in use. Testing of the concepts that made the railway a safe and efficient operation was done under his direction as well.

And when the Denver & Rio Grande Western narrow-gauge line was put in that ran from Sante Fe north, he designed that one, too - and on occasion, he had gone out himself and repaired downed lines.

In a word, Ed Lake was an icon of railroad communications in the Southwest and would be a pioneer in the adoption of wireless technology in later years as it became part of the infrastructure the railroad needed to support its growth. Telegraphy, however, would last for many decades to come and Ed never lost his touch on the key - his fist was legendary and every lightning slinger on the division far and wide knew he was sending when they heard his code and copied his personal call sign "EL" - 'dit daaaahh'.

Starting as a young telegrapher and working his way through an early education in electrical engineering at the University of Colorado in Boulder, Lake had absorbed everything there was to know about electricity and applied it intuitively to telegraphy on the railroad.

Ed was one of the few railroad engineers that actually understood and used the Telegrapher's Equations developed by Oliver Heaviside in England in the 1880's which enabled true engineering insight to the physics and behavior of telegraph signals over a wire and which would be instrumental in the pioneering of transatlantic undersea cabling.

For a brief month he had even wangled a visit to Nikola Tesla's laboratory in Colorado Springs in 1900 and what he saw fired his imagination for the future of electricity and its possibilities on the railroad.

As Chief Engineer he took a personal interest in those men or women who would become dispatchers on the division and when the initial interviews with dispatchers were finished, he would invite the individual to have breakfast with him near the depot for the job.

The dispatcher had total control over the safety and movement of trains on a division of the railroad and the buck stopped with them. It took a special kind of person to handle the pace of work and the stress involved and the first job in that role was a crucial test of an aspiring dispatcher.

Ed Lake did not suffer fools gladly and for him character trumped every other virtue of the candidate - he assumed the person was competent or he would not be meeting him, but now he wanted to know the character and integrity of the future dispatcher on his railroad.

Mac came over on the train from Gallup and they met at the old restaurant in the La Fonda hotel on the plaza in Sante Fe. The same one that would later become Fred Harvey's famous La Fonda Hotel and a beacon for the arts movement in New Mexico.

Mac was 25 years old in 1916 and this would be his last interview for the night trick dispatcher's position on the Sante Fe railroad. Actually, it was less of an interview than a 'sniff test' that Ed liked to conduct to check out the person he would entrust to the railroad's operations.

As they sat down to breakfast Ed sized up the young man in front of him - a large specimen with red hair, deep brown eyes, an intent look and obviously comfortable in his own skin.

Nothing about Mac McLoughlin indicated rashness or jumpiness and Ed was glad to see that - it was obvious Mac was an Irishman and they had a certain reputation on the railroads that Ed would make sure did not get in the way as a dispatcher on the Sante Fe.

Lake knew what his own reputation was on the railroad and he did not want someone who could not handle pressure of any kind in a dispatcher's position. And he certainly did not want someone intimidated by himself. It was too easy for those types to pass up only good news, and that, Lake knew, would be devastating to the railroad.

He already knew that Mac was highly competent as a telegrapher and could handle the most challenging situations in that role. Ed liked to listen in on the wire and read the mail on operators and copy their code to see firsthand how they handled themselves when he knew a candidate was bucking for a more senior role.

As their frittatas arrived, Ed watched to see what Mac would put on his dish - he had a quirk that he liked to guess which condiment the candidate would put on his eggs - if they chose the hot sauce from Jalisco, Mexico, Ed was tempted to think things would go well. If they preferred the Salsa Verde, Lake would dig a bit deeper in the ensuing conversation.

It was just one of those peculiar, mildly eccentric aspects senior management picked up along the way that they found fit their interviewing experience - anecdotal though it was - so he felt comfortable when Mac reached for the hot sauce from Chapala in Jalisco. Years later it would come in a bottle with a wooden stopper, a pretty senorita on the label and go by the name Cholula.

As the breakfast continued, with a prodigious amount of black coffee being consumed by the two of them, Lake found himself warming to this likeable Irishman - especially when he learned that Mac loved to read and had acquired quite an impressive library on electricity and telegraphy.

Without saying it, Ed thought it might be the case that Mac could go further than dispatching trains on the Sante Fe if he was interested in a later career change.

But for now, he was satisfied that the young McLoughlin would be an excellent candidate and they parted with Ed's promise he would hear back from him on the job in the near future.

Mac was satisfied with the morning - and the frittata and coffee - and walked over to the depot to meet the day operator and chew the fat for a while.

As evening wore on, Mac took the seat and handled train orders to give a break for the operator then opened a wire to KL out in Holbrook, Arizona for a quick personal chat about a road trip they had planned to Pueblo.

Mac had followed up with KL after reading the mail on messages between the Rocking B Ranch and KL when he had learned of Mary Bean.

The two of them struck up a friendship over the wire and it was not long before they had convinced Sara Bean that it would be nice to get up to Pueblo and make an acquaintance - after all, they had gotten to know the Ranch operation well after the heifer purchases from the Aztec spread.

The Rocking B Ranch was always busy with visitors coming, going or staying a few days to conduct business or attend the social events the ranch occasionally put on - especially the barn dances for which the Bean's were famous.

Sara was intrigued by the nice, polite messages she heard from KL and she had enjoyed hearing about the short introduction he had with her sister-in-law Penelope back in the Canyon Diablo days many years ago.

Standing on the ranch house veranda at sunset she had passed on the greeting from KL and noticed Penelope pause, gaze out over the prairie with a remote look and a hint of a wistful smile as she turned away.

Seeing that, Sara thought it would be interesting to see what came of a reunion, so to speak.

Penelope was now in her early 70's, still trim and fit in the saddle and had retained her good looks - albeit with a hint of silver in her hair - which only made her more attractive as she aged.

Penelope Bean was one of those rare women who age gracefully and retain their beauty almost effortlessly.

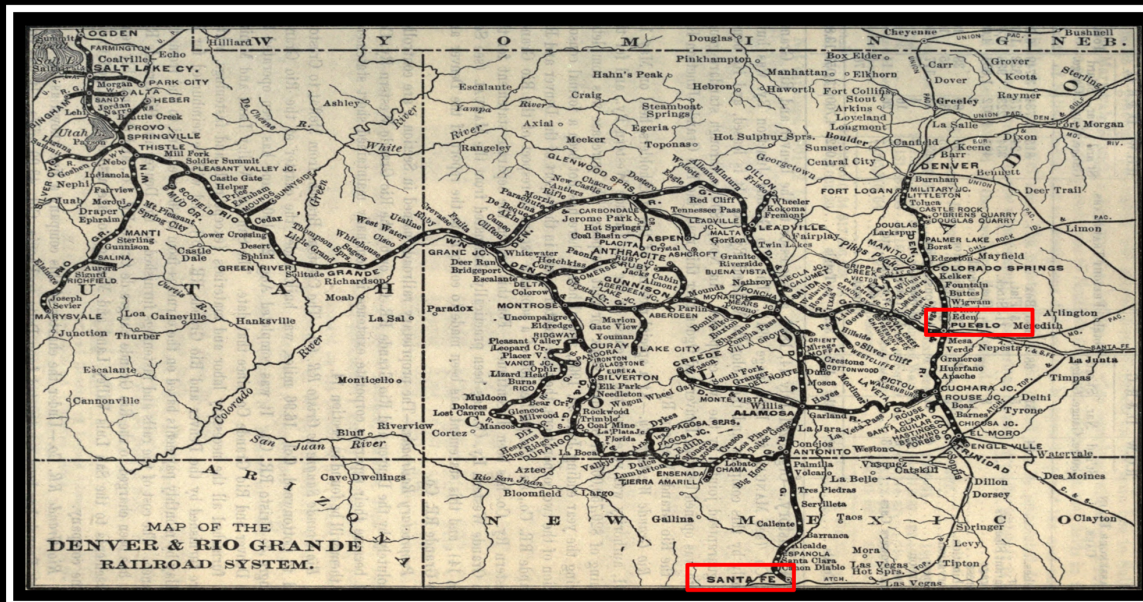
And, Sara thought it would be nice for her daughter Mary to meet someone outside the Pueblo community - she was getting on in years - she was 32!

Sara secretly wondered if she would be too much like her Aunt Penelope in marital matters and fretted to Tom who had no patience with the thought - he had watched his sister manage just fine in life so far without a partner and he was unconcerned about his daughter.

But Tom was a man - and a Bean, and Sara had different ideas.

Mary Bean's beauty was similar to her aunt's but her temperament was a reflection of her mother's Irish heritage and she was a bit of a firebrand - likely a key to the reason eligible bachelor's in Pueblo County were attracted to her like a moth to a flame - but none survived the experience long enough to become attached.

"Yes...", Sara thought, "it would indeed be a good thing to have this operator KL and his young friend Mac McLoughlin come for a visit to the Rocking B Ranch..."



Chapter 4. Raton Pass

“*Ra-tone*, Mac, that’s how it’s pronounced...”, KL drawled as the train wound its way up to the pass through the eastern Sangre de Cristo Mountains of northern New Mexico toward Trinidad.

Mac tossed that off as a minor slight. He knew KL was a Texan, even if he hadn’t lived there most of his life - but Mac being a native of New Mexico, let it ride.

He had too much respect for the old lightning slinger to get his Irish up and he knew full well the name Raton was Spanish for “mouse”.

“Huh - imagine a *Texan* telling me how to pronounce *Raton*...” passed through his mind but he practiced self-discipline and ignored it any further.

Mac also knew the pass was named for a nearby lava-capped mountain that was plagued with rodents - and the bubonic plague which occasionally reared its ugly head in the area.

“Yessir, this territory has seen more bloodshed over railroad rights than most of the so-called range wars of the Old West. But if you’re ridin’ a horse up through the Raton Pass you’ll have to beat the early snow”.

KL was thinking out loud, back to the old cattle drives headed north out of Texas up the Goodnight-Loving Trail through the pass and on to Denver in the late ‘60’s.

Now when KL talked shooting wars Mac was all ears.

He had heard about the sheep-versus-cattle wars, and the farmers versus both of *them* who were losing their grazing rights, but he didn't know too much about the railroad wars that had been fought in the Old West.

He had heard from the horse's mouth - KL's - about the famed gun-slinging lightning slingers of Canyon Diablo and now he was about to hear, second hand, about the conflict over the rights to the Raton Pass through the high country between Colorado and New Mexico back when the railroads laid track over the old Sante Fe Trail.

The grade was too steep to go over the peak at the border, so a tunnel had to be built - through the Pass.

In 1878 and '79, just before the Atlantic & Pacific Railroad (soon to become the Atchison, Topeka & Sante Fe) was built across northern Arizona, the small Denver and Rio Grande line was building its way south to Sante Fe from Denver. Both railroads wanted rights to the pass into New Mexico and resorted to armed gunfighters who would be paid to battle on behalf of their companies.

In the case of Raton Pass, the Denver and Rio Grande company ran out of money just as the Sante Fe hired professional gunfighters, so a potential ruckus was over without a fight.

Discovery of silver in the Leadville, Colorado mine, however, brought the war between the two railroads to life over the Royal Gorge, north of Raton, which then resulted in the Denver and Rio Grande hiring their own gunslingers.

That, in turn, was escalated by the Sante Fe railroad hiring the likes of Doc Holliday, Bat Masterson and a number of other notorious gunmen who fought for them.

Pitched battles were fought, both sides won and lost fights and it was finally settled in court with the Denver and Rio Grande in possession of the narrow route through the Royal Gorge west of Cañon City, Colorado.

Mac settled back in his seat as the train rumbled north toward Pueblo, closed his eyes and mulled over what a strange world it was when telegraph operators slinging lightning on railroads got mixed up in gunfights in the Old West.

He had yet to hear about KL's exploits as a telegrapher in the Civil War.

The Rocking B Ranch's Model T Ford was waiting at the train station in Pueblo when KL and Mac arrived.

The Bean's, true to Penelope's mantra of using the latest technology on the ranch, had one of the first of Henry Ford's production models and it was a good thing it had high clearance.

In the early days of automobiles, Ford wisely built his cars with 10 inches of clearance for use on dirt roads and trails because there were no paved roads and wouldn't be for years to come.

The Model T could ford creeks and clear ruts which it had to do to get from the ranch to Pueblo and all the cattle and cowboys for miles stopped and stared as the contraption rattled its way into town.

Mac and KL stopped by the station operator's desk to give their greetings to the agent they had come to know well over the past months then stepped outside to greet Tom Bean.

Tom sized up the older man and took a good hard look at Mac. He knew what Sara was thinking.

KL had weathered well - he had a few creases around the eyes from squinting in the Arizona sun for many years - but was trim and still a good-looking Texan at 70 years.

Mac was returning the steady gaze of Tom and both men approved of what they saw.

Tom stood six feet tall and Mac had him by a good inch and 20 pounds. And there was no fat on him.

Handshakes and greetings dispensed with, Tom and the men got into the Model T and the two lightning slingers took their first ride in an automobile out to the ranch...



Chapter 5. The 4th of July

Penelope Bean was the first female president of the Colorado Cattlemen's Association in its nearly 50-year history and she was delighted to host everyone who could make it to the annual event at the ranch. She was not a militant suffragette, rather, she was plain spoken in her position on female equality for her time and especially in the West. The other ranchers respected her accomplishments and it would have been highly irregular for the owner of the largest cattle ranch in Colorado not to assume the role.

The Rocking B's picnic and dance would be a fine way to celebrate a lifetime of accomplishment and show hospitality to all the members of the CCA that could make it to Pueblo.

The 4th of July in 1916 fell on a Tuesday and the ranch spent the morning putting together the barn for the afternoon and evening's party.

Flags and banners were strung up. Electricity was available on the ranch - the first in the county, and lights were strung everywhere, albeit sparingly.

KL and Mac had arrived on Sunday and their arrival was a major event on the Rocking B.

When Tom pulled the Model T up in front of the main ranch house veranda, Jack and his wife Helen, Penelope and Sara with Mary Bean all stood on the porch, waiting.

KL stepped out of the Ford first, looked up and everything he had pushed to the back of his mind since those short days in Holbrook, 34 years ago came rushing back. He blushed through a deep Arizona tan, stepped forward and took his hat off.

His blond hair had thinned a bit and turned a lighter shade and his handlebar mustache was now trimmed to a duster - like Errol Flynn's.

Penelope remembered him.

She extended her hand in a firm grip, smiled and said, "Welcome to the ranch, KL."

Sara was trying to do several things at once.

She was watching KL and Penelope out of one eye and trying to take in the landscape of Mac McLoughlin at the same time and not doing a good job of either.

Mac for his part was a bit embarrassed, standing on the steps to the veranda until Sara swept down and grabbed his arm and introduced herself with a smile.

It was a sight.

Sara's fiery red hair and vivid green eyes matched Mac's hair with his deep brown eyes and Mary was stunned by the sight of the two of them together.

Mac looked like a giant beside her mother Sara and, she had to admit, he was a handsome man.

Indeed, a very handsome man.

Paco Barnes was a good cowhand and a bad drunk.

He had ridden for the Rocking B Ranch for three years and in that time had demonstrated his prowess on a horse. He had also pulled his weight around the spread to the satisfaction of Jack Bean, the foreman.

But when he drank - and drank too much - which wasn't often but often enough, he went one of two ways.

He either got sloppy and maudlin or turned mean and gnarly and usually wound up battered and bruised from starting a fight when it was the latter.

Paco had been warned by "Stalk" - as the boys called Jack behind his back - about his drinking and would be sent packing if it happened one more time on the ranch. Although the policy on the Rocking B was no alcohol in the bunkhouse, cowboys are cowboys and that wasn't going to change.

The likeliest opportunity for Paco to be kicked off the ranch would be the annual 4th of July picnic and dance the Rocking B put on each year.

Paco had also taken a liking for Mary Bean and made it clear in the bunkhouse. He talked big and swaggered around the place spouting off about his plans to make her "his girl" and when he did so he made the other cowhands uncomfortable.

Everyone knew Mary and liked her spunk and she certainly was an attractive young woman, but none of the other cowboys would have thought of saying anything out loud about her. The cowboy's code of ethics dictated that that was first, disrespectful, and second, a fast way to get crossways with Jack and Tom - let alone Penelope.

But men prone to drink too much often talk too much, too.

Mary sat at the kitchen table, drinking coffee, watching Sara and Mac at the desk by the bay window in the ranch house.

Sara was showing Mac the telegraph equipment they had installed many years ago and Mac had taken a turn at the key, sending a message on cattle sales to a broker in Kansas City.

Mary had no interest in telegraphy whatsoever but enjoyed seeing her mother and Mac hit it off so well and she could tell Sara had taken to him right away. And of course, Mary had heard the story of how her mother and father had met in the Pueblo depot a hundred times.

It was funny how telegraphy was so intertwined with their lives, Mary thought to herself, as she watched Mac and Sara engrossed in the Morse code coming out of the sounder.

Tom Bean had been reserved around Mac all week - he had only one daughter and he doted on her - although he stopped short of spoiling her which was a real temptation because she had the perky personality of her mother and was a loveable young lady.

And Mary was an excellent rider and shot, like her Aunt Penelope. In fact, she was more like her aunt than her mother in some ways. That was the Bean in her.

Mac could sense Tom watching him all week and had been slow to show his true interest in Mary.

He had spent much time working and no time sparking a woman in his young life - there was no one in Gallup that had interested him, and he was yet to meet anyone he was attracted to in Sante Fe.

But he had fallen hard for Mary within 24 hours of meeting her on the veranda on Sunday...



Chapter 6. The Broken Wire

The sweat dripped off Mac's brow in torrents.

He pumped the handle on the handcar at a steady pace and at 7 miles per hour he got to the tunnel in 45 minutes then stopped to rest and drink more water.

At almost 4,000 feet above sea level the air was dry even in the monsoon, and dehydration was a constant concern when you were exerting yourself the way Mac was.

Pumping a hand car on a railroad in northern Arizona in the month of August for almost an hour - even if it was only 85 degrees - meant you drank gallons of water to keep your strength.

And he had another mile to go after the tunnel to reach the broken telegraph wire on the hillside above the track.

It was only three and a half miles as the crow flies but five miles of hard work when you were self-propelled.

It did, however, give you time to think - the scenery was beautiful along the Verde River south of Perkinsville and pumping the handcar was monotonous.

The river was pristine, clear and swift - fed from springs in the rugged canyons above Perkinsville. The riverbanks were lined with sycamore and cottonwood trees, green grass grew along the banks and eagles rose silently above the canyon walls in the afternoon sun.

Mac knew the line was down somewhere south of the station, but it wasn't until the train came through from the mine in Jerome that the fireman just happened to look up at the right moment to see the break in the line on the hill above the track.

That good fortune saved Mac a great deal of time - he would not have to slowly trace the line which did not always follow close to the rails to find the break - it could take a full day of hand car travel and hard hiking if the engine crew had not found it for him and marked the spot a mile south of the tunnel.

The trip, pumping the handle of the handcar, gave him a good opportunity to think back over what had happened in the past six weeks - how he had managed to go from a fledgling night dispatcher in Sante Fe, to falling in love in Pueblo, Colorado and end up pounding brass in the high desert in the middle of nowhere, Arizona.

By the time the dance started on the evening of July 4th on the Rocking B Ranch in Pueblo Mac had managed to express his feelings for Mary Bean and she had replied that she felt mutual

affection. But they had not explored the future beyond that when the events of the evening unfolded and threw a dark cloud over a budding relationship.

Everything started well enough and Mac had danced several times with Mary who was in popular demand as she had been at these dances since she was a teenager.

But fate took a twist when Paco Barnes came in from the bunkhouse with a few other cowboys - all of whom had been drinking.

The barn was crowded, and the revelers were enjoying the music. Kids were racing around and food was abundant on tables along the wall under Independence Day bunting in red, white and blue.

Paco saw Mary dancing with Mac and made a beeline for the pair and with a slight stagger, tapped Mac on the shoulder to cut in.

Mac had no idea who the man was and in the dim light of the barn did not notice that he was drunk, so he relinquished Mary's hand and stepped back.

As he did so, he noticed a worried look on Mary's face, but he had no idea what it meant.

Mac backed off by the table with the food and kept his eye on the two as Paco began to manhandle Mary on the dance floor.

She was a strong woman for her size, and she did not take kindly to this drunken cowboy who had been bragging in the bunkhouse about what he planned to do when they got back to the dance, but she was no match for the crude way he was handling her.

Paco was a broad-shouldered man of middle height matched with great strength - he was the best calf roper on the Rocking B when they branded calves. He regularly competed in the rodeo and often won first prize for his speed and took great pride in his performance. He especially loved the crowds who watched him.

The cowboy was never without a knife - a six-inch, laminated blade sheath knife with a deer antler handle that was held in a custom pocket sewn into the inside of his cowboy boot.

Guns were only worn out on the range and prairie by this time in the 'teens and usually the occasional rattlesnake was the only thing a cowboy would shoot.

What happened next was a blur to most people who saw the fight but for Mac it unfolded in slow motion.

Mac quickly stepped over to the drunk and pulled his hand away from Mary's waist, turning Paco around to face him.

At that moment Mac could clearly see the man was drunk and his expression had turned to a look of pure hatred - Paco and everyone else on the ranch had heard the rumor that the big Irish visitor from Sante Fe had struck up a relationship with Mary - and now his anger turned to action as he pushed Mac back against the table and reached into the top of his right boot for his knife.

The big Irishman put out his hand to push Paco back from him when he saw a glimpse of the knife blade in the dim light. With a lightning reflex he grabbed the wrist of the knife hand and held it back from his stomach.

Mac was half a foot taller than Paco, but their strength was fairly matched, and they now were locked in an embrace with the knife between them.

In the next instant Mac swept his leg across Paco's left leg and with his right hand pulled down hard on the wrist of his knife hand.

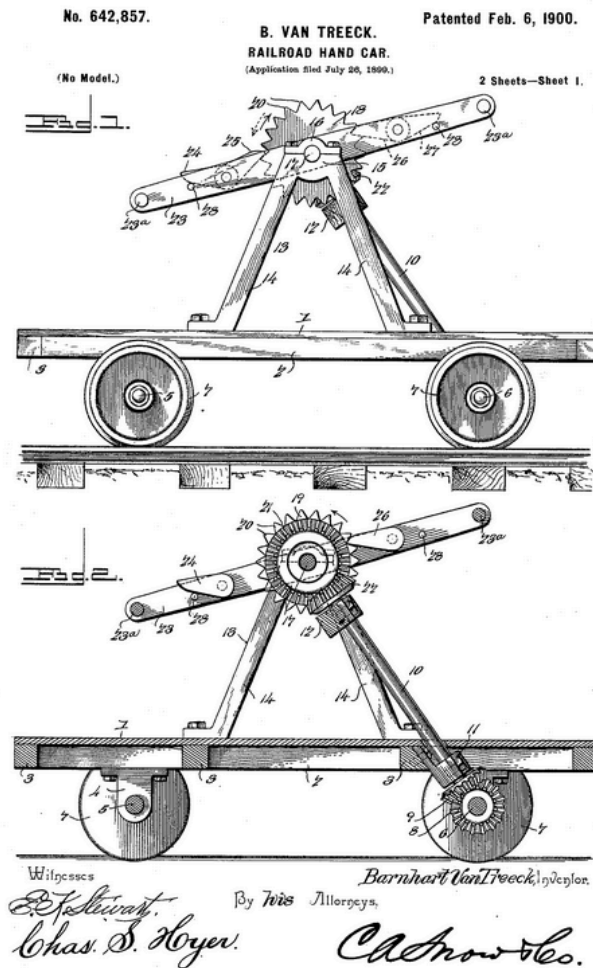
Paco, the cheap whiskey affecting his balance, fell forward as they collapsed on the floor of the barn. The knife plunged into his chest, piercing his heart.

A pool of blood began to spread out on the floor as Mac kneeled over the fallen man and the crowd around them gasped.

Women screamed and Mary's hand flew to her face as she fled from the barn.

In the next moment Tom Bean appeared and grabbed Mac by the arms...





Chapter 7. The Snake

Mac stopped the hand car and wrangled it off the rails. He draped the gaffs over his shoulder, made sure his lineman's pliers were in his pocket, slung a coil of wire on his other shoulder and checked the flap on his .45.

The pocket key was in his overalls so he could test the line when he was finished.

He had climbed plenty of telegraph poles over the years but out here in the canyon he was especially wary of rattlesnakes.

The Mojave species which had been seen in the area was even deadlier than the common Western Diamondback, although it usually liked the canyon floor as opposed to the hillside he would be on.

But you never knew about snakes - they couldn't be trusted. They would as soon lie to you as look you in the eye.

He began to work his way up the hill, and it was steep. He needed to pull himself up - hand over hand across large boulders and he was concerned about putting his hands in places he could not see.

He knew better than that and he also knew a good way to get snake bit was to step clear over a boulder, exposing your ankle or leg to whatever might be lurking under the rock on the far side.

Rattlesnakes like to sun themselves on flat rock surfaces and Mac was contemplating whether he would be able to unsnap the leather flap on the Colt and manage to shoot above his head if he had to.

Bruno Foster had given him careful instruction on the handling of the .45 semiautomatic invented by John Browning and issued to the US military in 1911.

Gunnery Sergeant Foster had served in the US Marines in campaigns from the Philippines to Central America and when he finally mustered out to return to the ranch at Perkinsville he liberated a couple of .45's to keep as mementos.

The trade they agreed to was one to Mac for teaching Bruno the fine art of telegraphy - what else was an ex-Marine to do around the ranch for entertainment?

Shooting empty cans off fence posts and taking care of snakes was a common pastime.

So, Mac, heretofore having never touched a weapon, was given the finest handgun instruction possible with all the tender loving care a former Marine Corps Drill Instructor and combat veteran could muster.

Mac survived the teaching and became a skilled marksman with the pistol, which would turn out to be a lifesaving skill a year later and one for which he would be grateful to Bruno for the rest of his days.

Surveying the downed wire, Mac strapped the two leather straps of the Buckingham climber's spikes on each lower leg and climbed the pole to check the insulator. The gaffs meant he could go up the pole with ease, despite his weight.

If the glass insulator was damaged by the stress that broke the wire it would compromise the telegraph signal integrity - especially during rain or snowy weather and if needed, he would replace it. The railroad was short of line maintenance men and Mac would have to take care of any repair by himself. That was the deal on a telegraph line for an obscure railroad in the middle of nowhere, Arizona.

The view from the top of the pole gave him a good look at the next pole and he could see exactly what he needed to do to fix the wire.

Climbing down, he took off his gaffs and straightened up to see a rattlesnake on the rock in front of him, three feet away.

The rattler was not a Mojave and it wasn't a Western Diamondback, either.

Mac stood stock still, but the snake did not rattle its tail - they usually did but not always. They could not be trusted. The snake was coiled, and its head was raised high above the rock. It would be a good four feet in length, he thought, probably about the largest one he had ever seen.

Mac rifled through his acquired knowledge of snakes in Arizona and settled on the Arizona Black rattlesnake, which fit what he saw - its coloring was the signature black; it had the rattles and this one had orange crossbars on its back.

In its own way it was a beautiful killing machine - devastating to small rodents, lizards and birds and was only a threat to humans when surprised.

"If it wasn't so deadly, it would have a certain beauty about it", Mac thought as he very slowly unholstered his .45 and shot it once through the head.

Since he was alone, he did not take the precaution of cutting off the head and burying it. When people were around, they sometimes found to their great pain that a recently detached head of a rattlesnake was still lethal for a short time and burying the head was the safe way to prevent a snake-bite story no one would want to live to tell.

He had come across a nest of rattlesnakes once, down below him in a boulder strewn hillside where he could safely sit and watch them slither all over each other in a pile.

The memory brought a cold shudder to him even in the heat of an August day in the high desert.

Hiking along the downed wire Mac began the process of repair - finding both bitter ends then splicing in a new section which he could use to pull the wire taught on the poles before finishing the job up a pole.

When he made the final Western Union splice, he cut in on the wire with his pocket key and sent a message to the operator in Clarkdale who answered, and the job was done.

By this time, he was bathed in sweat and glad to get back off the hill on to the hand car. The operator in Clarkdale had told him when the last train would come out from Jerome and he had just enough time to make it back to Perkinsville before the train left the mine.

He was too far up above the river to take a dip which is what he desperately wanted to do to cool off, so he poured water over his head and washed his face with his bandana.

Five gallons of water would be almost gone by the time he got back.

Pumping away on the hand car he began to think through the events that occurred after Paco was killed in the barn.

Tom Bean did not know what had happened and neither had anyone else seen the close quarters fight between the two men. But that hadn't stopped the two compadres of Paco from declaring they knew exactly what had happened - why, they had seen it all!

According to these two, Mac had been angry that Mary was dancing with Paco and had torn him out of her arms and attacked him - Paco had no choice but to defend himself but the big Irishman killed him with his knife.

There it was, plain and simple.

The problem with their lies was the smell of whiskey on their breath and Tom immediately doubted what he was hearing.

The Sheriff of Pueblo County never missed a dance or party at the Rocking B Ranch, and he was on the scene in minutes, taking down the accounts of Mac and the two cowboys who were quickly sobering up. They knew Tom would give them the boot off the ranch as soon as this was cleared up.

The Sheriff took custody of Mac and they rode into Pueblo with Tom and the long process began of declaring self-defense and clearing his name.

It would take ten days for the whole affair to be finally resolved and in the meantime, he got a message from Ed Lake that his nightshift dispatcher's position had been given to another man - the railroad had to go on. Ed apologized but hoped the promising young Mac could understand.

Mary was badly shaken by the event and her attitude toward Mac cooled as a result.

When Mac finally left the Pueblo County jail, he was depressed, alone and jobless.

He found work as a telegrapher in Perkinsville which seemed a good place to spend some time and figure out what he should do next...

_____ - - - - _____



Chapter 8. Over There

In November of 1917 Mac McLoughlin was sitting on a fence rail at the Perkinsville Ranch in Arizona, talking with Bruno Foster.

It was getting cold at the end of the day and they would soon have to return to the ranch house and sit in front of the fire, but for now it was pleasant to see the stars in the Milky Way above them and hear the pack of coyotes working out in the meadow, mousing around.

Bruno had become a competent telegrapher under the careful tutelage of Mac and now it was time for Bruno to know Mac's plans.

Bruno had him figured out already, but he let Mac break the news.

The war in Europe was turning badly for the Allies and since the reception of the Zimmerman telegram in January earlier that year, President Wilson had finally been pushed into the 'war to end all wars' despite every effort to stay out of it.

Germany had secretly proposed by telegram that Mexico enter the war against the United States as their ally to keep the US occupied at home - and in the bargain Germany would help to see that Mexico regained the area of Arizona, New Mexico and Texas. The telegram was intercepted by the British and leaked to the Americans and that did it - the US finally declared war against Germany in April.

The US began to send troops 'over there' in June and they began to fight in October but Mac was still over here.

He had been in Clarkdale one weekend in the late summer and heard the song "Over There" on a record sung by the Peerless Quartet. The country was in a patriotic mood and the first stanza had stuck in his mind, especially the last verse...

"Johnnie, get your gun
Get your gun, get your gun
Take it on the run
On the run, on the run
Hear them calling, you and me
Every son of liberty
Hurry right away
No delay, go today
Make your daddy glad
To have had such a lad
Tell your sweetheart not to pine
To be proud her boy's in line."

It was that last line that really haunted him.

Mac was a healthy, young single man with an Irish heritage and a strong feeling of association with Great Britain, even though Ireland itself was beginning to have internal struggles with her role in the war.

But the sense of patriotic duty that gripped the nation had taken hold of Mac and being young he was convinced of his immortality in a combat environment.

He had not heard from Mary Bean since the disastrous end of the July 4th party on the ranch in Colorado that ended with the death of Paco Barnes and he was despondent because he knew she was 'the one'. He imagined she would not be pining for him, even if she knew what he planned to do.

Rather than sit out in the desert and suffer in the slough of despond for a lost love, with the coming of Bruno Foster a plan was formed that would let Mac depart without leaving the railroad in a pinch - Bruno could take over the telegraph operator's duties at the Perkinsville station and Mac would enlist in the US Army and serve in the Signal Corps.

Bruno had figured out what Mac planned to do with the exception of the Army angle.

As a United States Marine, Bruno listened patiently until Mac said,

"And I'll join the Army...", when Bruno exploded.

"Are you crazy, Mac?! Why would you do that when you can fight first with the Marines? Why, those guys hang back and let the artillery do all the work then they go in and mop up. The Marines do it the right way - we take the ground first then bring up the artillery in the rear and let them pound away later!"

He knew this argument was coming but Mac kept his own - he had plans that he would not be another Marine rifleman in a platoon, rather he would use his expertise in telegraphy to leverage a position in the new technology of wireless - radio. He had read much about the new emerging science of radio waves that did not need wires to carry signals and it intrigued him.

Mac figured he could learn a lot from a military training program that he could use when he came back - as every soldier believed he would before he got to the front lines and saw what the trenches were like.

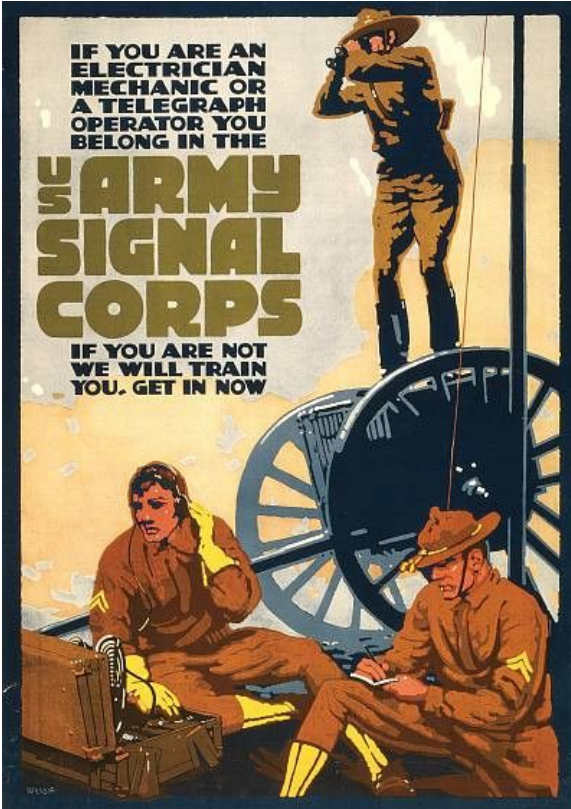
The argument lasted late into the night until the fire burned down to coals, the great room of the ranch cooled off and it was time to add wood to the fire and retire for the night.

Mac was unconvinced and Bruno was mumbling to himself as they left for their rooms.

As it turned out, they both got what they wanted.

The Marines also needed men for the Signal Corps and when Mac found that out, he willingly enlisted under the watchful eye of Gunnery Sergeant Bruno Foster, USMC - Retired.

The long train ride from Flagstaff to Parris Island - the US Marine Recruit Depot in South Carolina - gave Mac an appreciation for the vastness of the country and insight into the different young men with their accents from other parts of the nation who would soon distinguish themselves at Belleau Wood...



Chapter 9. Belleau Wood

The shell fragment ended Mac's tour of duty in the forest of Belleau Wood on June 23rd, 1918.

Shrapnel from an artillery shell exploding in trees near his fighting position caught him in the left side and left a gaping wound with a collapsed lung. Thankfully for him, he was promptly treated in a field hospital which saved his life and sent him on his way back to the US for recovery.

But first he had fought through the entire month of June with his brigade which suffered terrific losses to interlocked machine gun fire from the Germans with hand-to-hand fighting that marked the Battle of Belleau Wood as one of the most ferocious combat experiences in the history of the Corps.

Years later, Marine veterans of the Battle would reminisce at gatherings and tell their stories to young men who would later create their own battlefield memories from the South Pacific in World War Two.

Mac suffered through the 90 days at Parris Island in the Recruit Depot, went to advanced infantry training and was then selected for Signalman duty with the Marines.

He was trained in both wire and wireless telegraphy as the Marines applied it and found that it was a work in progress - much of the training reflected the experience of trench warfare in the three previous years of the war in Europe which turned out to be irrelevant for the Belleau Wood campaign near Chateau-Thierry outside Paris, France.

When the fighting through the month of June rose to its fiercest, Mac was ordered away from his radio and telegraph key in an observation post and following the mantra of the Marine Corps, "every man a rifleman", he was put forward in the hottest action as they fought the Germans in the woods.

In addition to a 1903 bolt-action Springfield rifle, Mac carried his personal sidearm - a .45 M1911 which he had traded telegraph lessons for with Bruno Foster back in Perkinsville. Normally only officers and NCO's wore the .45 but Mac's platoon sergeant knew the story behind the pistol, and he did not make an issue of the Corporal carrying one. In fact, a number of Marines carried weapons of their own choosing in addition to government issue.

Nearly every time Mac pulled his pistol out of the leather holster with the embossed U.S. on the flap, he would fleetingly remember Bruno out in the desert and the Verde River Canyon below the station, reminding himself he had volunteered for this duty.

The Perkinsville station, the wild and rugged canyon and especially memories of Mary Bean all mixed together in a jumble and seemed from another life now that his attention was focused on staying alive on a minute to minute basis.

He mentally thanked Bruno for the expert instruction he had received in use of the .45 in close combat situations - it saved his life when he ran out of ammunition for his Springfield in the middle of a bayonet charge by the Germans. He parried the thrust of the oncoming blade, knocking it aside with his rifle while he reached for his pistol at the same time the German reached for his knife.

Mac had practiced the draw-and-fire-without-aiming maneuver countless times in the desert at Perkinsville under Bruno's demanding glare and it had saved his life.

Mac had fought the way he was trained.

But a shell burst in the trees above him put the big Irishman down three days before the battle ended with the Marines in possession of the wood.

Mary Bean had plenty of time to mull over her thoughts about Mac McLoughlin.

She had been quite taken by his presence, good manners and forthright nature when she had met him at the Rocking B Ranch the past summer and they had come to a quick

acknowledgement of their mutual interest in one another. Actually, Mac had initiated the conversation because he had been struck by cupid's arrow deeper and faster than Mary.

There was more than a spark that was lit in the short time they were at the Ranch together although it was nearly put out by the death of Paco Barnes at the 4th of July party.

That tragedy shook Mary up for many months and by the time she had sorted through her emotions and mastered her feelings - with eventual help from her mother, Sara - she realized she did indeed want to see Mac again. Sara had known from the first day that Mac was destined to be part of the family, but she had held back and let Mary work through the situation from a respectful silence until she sought her Mother's thoughts.

The bond between mothers and daughters in some families is a special and mysterious relationship compared to that of fathers and sons, and it was especially so in the Bean family on the Rocking B Ranch. The women of the Ranch - Penelope, Sara and Mary were independent and strong women but the bond among them was stronger and unbreakable.

Sara used her telegraph connections to track down the Irishman who had disappeared and after a long and painstaking search finally found that he was last known to be the operator on the Verde Canyon short line railroad that ran from the Jerome mine to Clarkdale and on up through the Perkinsville Ranch to the Sante Fe in northern Arizona.

When she finally got in touch with Bruno at the Perkinsville station one night a year later on a circuit set up with the help of operators in Holbrook and Gallup, Sara discovered that Mac was fighting with the Marines on the Western Front against the Germans.

Bruno had just sketchy information from a letter he had received from Mac in July and he passed along what he knew in telegrapher's abbreviated lingo. The whole story took more time than the circuit would allow, and the end result was the message that Mac was alive but had been seriously wounded in combat in Belleau Wood.

Sara signed off the wire with Bruno and pushed back from her table with Mary sitting nervously beside her key.

Mary could not copy code from the sounder, but she could see by the concern on Sara's face that the news was not good...



Verde River Canyon, AZ - the railroad runs along the left rim of the canyon on out to the Perkinsville Ranch.

Chapter 10. Blackie

Mac took off his reading glasses and set them on the lamp table beside the rocking chair in front of the fire.

Mary was asleep in her chair closer to the fireplace with an afghan over her lap.

Her once black hair was now a silvery grey and as Mac looked at her his thoughts roamed over their life together.

He had brought out the letter he had received 50 years ago today, recovering in a war hospital in Paris, France - one he had kept and protected as one of his most prized possessions.

Blackie, the Labrador Retriever, stretched by the stone hearth and looked up at Mac with an inquisitive look which meant, "Is it time to go to bed now?"

Mac smiled and nodded his head and Blackie pulled himself up, slowly and carefully with arthritis making him tread tenderly off to the bedroom, knowing that Mac and Mary would soon follow.

Mac looked out the big bay window to the prairie bathed in silvery moonlight and the first snow of the year 1968.

How time had flown once he had received that letter, and how it had lifted him up and made him want to recover as fast as he could will his body and mind to get over the wounds and horrific combat he had seen with the Marines at Belleau Wood.

The nightmares had stopped when the second war had begun. For some reason, having two sons go off to war in the South Pacific with the 1st Marine Division had pushed his own war scars to the recesses of his mind and in turn he had worried with Mary for three long years as their boys fought their way through the South Pacific.

But they had survived and now with families of their own and grandchildren in both Colorado and Arizona their life had been full.

Mac held the letter in his hand, read it again and thought about the life they had lived after he had come back to the ranch in early 1919.

Marriage, a career with the railroad as a telegraph operator and dispatcher for the Sante Fe and a small ranch of their own in Pueblo County near the Rocking B with Tom and Sara Bean had made for a quiet and full life, spiced up with the antics of Penelope and KL who had finally tied the knot at age 80 and remained strong until their mid-90's.

Penelope had run the ranch until management was finally passed on to Tom Bean and the spread had been put in trust for the extended family.

Mac leaned back in his chair and felt a sharp pain in his chest.

The letter dropped from his hand as he quietly coughed with a low rattle - his eyes fixed on the fire.

The End

12th October 1918

My Dearest Mac,

How can I express my feelings to you after a long year has passed and we have not seen one another?

Please forgive me. I have heard of your wounds and pray that you are well now.

Mr. Bruno Foster of the Perkinsville Station in Arizona has given me your US Navy mailing address and I hope this short letter finds you.

Please come to Pueblo and we will talk.

I am yours,

Mary Bean

Rocking B Ranch

Pueblo County, Colorado

“Nate Goes to War”

Chapter 1. Christmas Eve, 1941

The sounder's armature ceased its clatter at exactly 0347 in the frozen morning of December 24th, 1941.

Charlie finished writing the Train Order in his signature script – the onion skin copies looked like calligraphy, just the way he was trained to do and had, in fact, been doing for the past 23 years.

Once the engineer and conductor picked off the order from the hoop, they would have no trouble reading it by the light of the fire box or the lantern.

Back in from the cold, Charlie sat down, leaned back, yawned and stretched in the wooden desk chair – the one with the arm rests and rollers that let him swivel around the operating desk to reach his bug, the Form 19's and other essential bits of stuff he needed to keep the trains running through his little one-man depot at Musselman Station.

He knocked the cold ashes out of his pipe and looked outside the window. The heavy snow was over now, and it was bright moonlight, the edges of the windowpanes had frosted up and the temperature was dropping. No chance of more snow now with 10 inches on the ground but the one-room station office was chilly, and it was time to put more coal in the stove.

Charlie took some pipe tobacco out of the Prince Albert can and tamped it in, lit the pipe with a kitchen match struck against the sole of his boot and put another pot of coffee on to get him through the night until the day shift operator showed up.

Traffic on the telegraph wires had picked up like a whirlwind after Pearl Harbor and the once sleepy stop on the line had now started moving equipment and men to their new homes in basic training far from southern Ohio.

As he sent a blue cloud of pipe smoke up in the air, he wondered what the telegraph traffic had been like when Camp Sherman, just north of Chillicothe, was at its peak during the last war. It must have kept the Army's 83rd Division Signal Corps Telegraph Battalion in constant motion with their training activity.

After the war period ended some of the same land would become property of the Veteran's Administration and a massive hospital complex would be built for returning WWI and even some of the oldest Civil War veterans.

Charlie liked the new pace on his division, but he was growing more concerned with every passing week as the nation began to gear up for war – it was clear we would be fighting on two fronts and very soon.

Again.

Born in 1901 and a railroad telegrapher since he was a late teenager, Charlie had been quite aware of the impact of a world war. He was too young to enter “The war to end all wars” but old enough to read the local newspaper accounts of battles across Europe.

And worse, he saw what happened when the men came back who had fought on the front – the VA hospital across town was overrun with soldiers who had seen too much.

The mental health wards of the hospital were filled with vacant stares - the so-called “thousand-yard stare” of men who spent too much time in trenches being pounded by the thunderous heavy guns of the enemy, day after day after day.

Along the two-lane highway north of town the brown wooden government sign on the front lawn of the facility told it all...

“The Price of Freedom is Visible Here”

His memories of the past war were jarred from mind as the sounder started chattering again, this time from JK down the line in town.

But it was not a new order - JK was asking Charlie how his son, Nate, was doing in the Navy.

Charlie thought about it and sent “I I”, di-dit di-dit, to let JK know he was there and intended to reply but he hesitated to start the chat.

Nate had finished high school in June and was shaping up as a fine telegrapher in his own right when December 7th changed his plans.

Like many telegraph operators, the art and skill of telegraphy was passed along from family member to member, whether it was mother to daughter or father to son or any other combination.

Charlie had Nate start during his early teens copying the sounder as he sat by his side. It was a lot more fun than sweeping out the small office or emptying the ash from the pot-bellied stove in the corner.

Sam the cat was always hanging around, brushing up against Nate’s leg as he took down the messages and practiced his script. The calico cat had a fascination for bugs and would lie down by the operator and occasionally bat at the weights as the dits were sent. But he kept the field

mice out during the winter and had the run of the office – as long as he didn't interfere with the operator's fist.

The perfect flowing lines and baroque curlicues of his Dad's handwriting would come with practice but for now Nate focused on getting the code down with total accuracy.

Charlie was proud of his son and told him so in a way that would not puff him up – but it was clear as the cold night sky that Nate had a gift for telegraphy. His father was mystified a bit as to how his son could keep the two Morse codes straight – American Morse on the railroad that sounded like clicks and clacks and International Morse on the radio waves Nate worked when he was on the amateur shortwave bands which sounded like pure notes of F₅ on the music scale. And to complicate matters further, some of the letters of the two codes were the same but others were not, and some were transposed from one code to the other.

Charlie shook his head at the thought of copying code in both systems and marveled at the ability of the teenaged brain to keep it all straight.

Both father and son were adept at handling a bug. After a few years pounding brass on a straight key Nate had pestered his way to a hand-me-down bug Charlie put together from a bunch of Vibroplex bits and pieces thrown into a desk drawer over the past two decades.

The "Frankenbug" had an Original base with parts of a Blue Racer and somehow got finished out with a couple of hand-carved red Bakelite paddles - extra holes had been drilled in the base for some long-forgotten lightning slinger who had bolted it down on his desk.

The thing looked like a monster but handled speeds up to Nate's limit at 35 words per minute when he worked on the ham bands, mainly chatting with Dave, his buddy from high school across town.

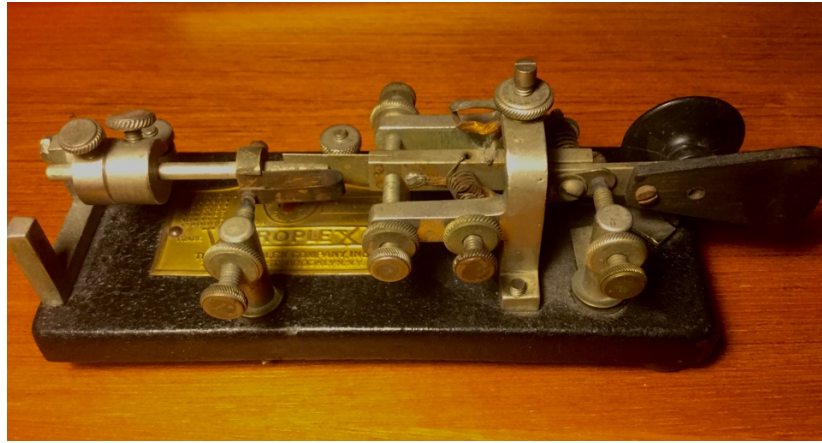
After school and sports, homework and chores were done Nate would call Dave on 80 meter CW and they would rag chew for an hour or so before turning out the lights.

"Twenty is plenty" was Charlie's rule and Nate never heard anyone on the wire go much above that. Perfect copy was the point, not speed for the sake of it. When Charlie had worked the high-speed wire for Western Union over in Cincinnati, he had his fill of higher speed code, but he preferred the leisurely pace on the wire at Musselman Station. He knew well every operator along the entire division, and they worked with a steady fist and everyone played the game – each operator's fist was instantly recognizable by all the operators.

Nate was good now as an 18-year-old for 20 words per minute of American Morse and perfect copy and that was plenty good enough for an opportunity to start work on the railroad.

Until Pearl Harbor.

Charlie pushed over the black knob of his Blue Racer's circuit closer and began to send JK the latest news from his son...



The "bug" telegraph key – a 1936 Vibroplex Blue Racer

Chapter 2 Flagstaff December 26, 1941

Engine 3773 chuffed to a stop, steam escaping and condensing, creating a cool fog and mist in the clear air at 7,000 feet above sea level in Flagstaff. It was 1035 on a Sunday morning, December 23rd, 1941.

Nate Miller and a few others walked through the car and dropped to the platform and stretched their legs.

Since leaving Chicago and winding day and night across the country they finally had the chance to take a break and spend the next several hours while the Atchison, Topeka, and Santa Fe Railway Company took care of coaling the train and replenishing water. And a hotbox needed attention – maybe repacking - that would keep them in Flagstaff longer than anticipated.

It was a crystal-clear day. Nate looked over the tracks and above the hotel across Route 66 and took in the view – the peak of Mt Humphrey was snow-capped and brilliant, towering nearly 13,000 feet at the summit and the first real mountain he had seen.

When they passed through the central plains and prairie then dropped down into New Mexico it was too dark to see mountains but the vast scale of the Arizona scenery in the early morning light coming across the top of the Grand Canyon State kept him riveted to the window.

That was a lesson in cinders and smoke from No. 3773 as he quickly learned which was the best window seat to crack open for fresh air and keep cinders from blinding him.

But he turned down the suggestion of his new friends, also headed to Boot Camp in San Diego, to walk down Beaver Street and see what the town had to offer. Nate was headed into the depot and made a beeline for the operator.

TJ had been on the day shift for years and wasn't about to give up his position for any other operator or even a promotion to dispatcher.

He had the best job on the division and now it was getting even better with all of the war traffic being handled by the Santa Fe after the war started.

TJ had kicked around the country as a boomer on many divisions in the Southwest after starting out as a telegrapher for the lumber barons from Michigan, who came out to log the tall Ponderosa Pines of northern Arizona after they clear-cut the forests of the lower peninsula.

No one who hadn't been there to see it would believe just how fast a lumber operation could lay track for a new stand of pine, put up telegraph wire, cut timber then pull the track and do it again 10 miles away.

As a boomer, TJ packed light and one of his prize possessions as well as working man's tool was his bug.

He kept it with him at all times, tucked away in the slick carrying case Vibroplex made. The other operators could pick him out of a crowd when he walked into town with it in hand. Train conductors knew what he was when they saw him walk through a car carrying the case.

The case carrying his Vibroplex Original was battered from his lumber days, but the precious cargo was in pristine condition – it was the tool he made his living by and he maintained it with pride of possession bordering on obsession. No one else touched TJ's bug.

As he turned around to answer a question from the ticket window, he saw a tall young man with dark hair and brown eyes looking at him with intense interest. TJ correctly guessed this fellow had some Indian blood and he was right – although it was quarter Shawnee, not a western tribe. There were still some, but very few, descendants from the Shawnee tribe that populated southern Ohio from earlier centuries. Nate Miller, had he known it, could have traced his heritage back to Tecumseh, the most famous of the Shawnee Indians.

"Mister, can I talk with you for a minute?"

TJ looked over at the sounder which was mute, which was unusual, then glanced back at the young man and said, "Just one minute and that's it – we are mighty busy nowadays."

As rapidly as he could get the words out, Nate explained he was on the troop train loaded with new inductees and headed to San Diego for boot camp in the Navy. He rushed through the explanation of his father's work in Musselman Station back in Ohio and asked if TJ might be able to pass along a message to his Dad.

TJ shoved a note pad toward Nate, and he jotted down a brief message in the railroad Morse code shorthand for his father.

It read, "GM POP GUD TRIP NW FLG MRI XMAS WL RITE SN 73 ES 88 MOM NATE" which translated into conversational English read, "Good morning, Pop. Good trip, now in Flagstaff, Merry Christmas will write soon. Best regards and love and kisses to Mom. Nate."

Time is money and the telegrapher's shorthand kept the message to a bare minimum and every telegrapher, either wired on the railroad or with Western Union or wireless knew the abbreviations.

TJ looked at the message and narrowed his eyes as he looked the youth over more closely.

"Did you work for the railroad in Ohio, too?"

Nate explained how he became involved in both railroad telegraphy and amateur radio and TJ listened with keen interest – impressed that he had planned to join the railroad as an operator. But he fully understood a young man's need to serve the country in war time.

"So, what do you plan to do in the Navy, young man?"

This led to a short discussion on Nate's intent to become a Radioman and if he could, ship out to the South Pacific. He wasn't sure what his options would be, but he figured once he got there and the Navy recognized his skill, they would put him where he could do the most good. And he had read plenty of books on sailing the ocean blue – especially in the South Pacific – as a young boy in land-locked Ohio to whet his appetite for the sailor's life.

Little did he know what was in store for his future afloat.

TJ looked up at the ceiling and pondered what lay ahead for Nate, thinking back over the years he roamed the country as an itinerant telegrapher, a "boomer" – dropping in to pinch-hit as an operator for a stay of weeks to months until the wanderlust grabbed him and he had to move on, bug in hand, to the next place.

When he met Sally in Flagstaff as a fill-in for a sick operator on the night shift, his peripatetic nature was changed for good and he decided to stay.

Actually, Sally made the decision easy for him – it was her father who was sick, and TJ spent a lot of time getting to know both her and her dad when he would visit them in the afternoons before his shift began.

TJ had a weakness for willowy blondes and Sally was in every way a perfect specimen of the type.

Nate had taken a seat by the operator's desk and TJ was just beginning to imagine the places Nate would see in the Navy when the sounder interrupted his thoughts.

While acknowledging the traffic with "I I" and "TJ" he pulled a new Form 19 down and nodded to Nate that he would see to it that his Dad got the message.

Nate looked around the tidy station and for the first time, began to feel homesick – the stove in the corner, the smell of the office, TJ's Original on the desk now steadily sending 22 words per minute.

He walked out the door, swallowing the lump in his throat and looked back at 3773 – slowly ticking over as he stepped up to his coach...



1926 Vibroplex Original bug

Chapter 3 Flying Keys March 10, 1943

The first sign things were going wrong were the shafts of piercing sunlight coming from the fuselage beside his head. Normally the space he occupied was rather dark.

Four evenly spaced holes, .303 inches in diameter, were letting the hot Pacific sun through to illuminate his radio stack on the PBY – the noise from the two radial engines above him on the wing along with his headphones masked the sound as the machine gun rounds from the Zero raked the aircraft.

The starboard waist gunner behind him opened up as the Zero overflowed them then the portside gunner took over, firing his .50 caliber Browning machine gun with a deft touch and a bit of deflection. The pilot stayed on his course for an instant too long – it only took a few of the heavy rounds in the right place to bring down the lightweight Zero which trailed smoke and began to pitch uncontrollably, ending in a vicious nose-dive into the sea. More experienced pilots knew better than to fly straight near an enemy aircraft for any length of time and usually a high-speed strafing pass would be the safest bet.

Unless the gunner you faced was an exceptional marksman.

In the few seconds the gunner leaned out of the bubble canopy to look down at the splash, another Zero came in from the starboard side and stitched a line of holes through the top of the fuselage and across the flight engineer's seat then high-tailed it out of the area, jinking like a madman.

Lucky for the engineer that he bent down to pick up his E-6B flight computer that had fallen off his lap when the slugs tore through the seat back and lucky for the Zero pilot that the portside gunner had looked down when he roared past at 300 miles per hour.

Sending Morse code in a cramped PBY's radio "shack" while being pursued and shot at by Zeroes was nerve-wracking and it took all of Nate's concentration to keep a steady fist. He sent the customary string of 8 dits to indicate error in his message then repeated the latitude and longitude the Navigator had handed him for the Japanese cruiser, three destroyers and a row of towed barges loaded with troops headed down the Slot for Guadalcanal. He sent the lat/lon first at his customary 20 words per minute then slowed down to 12 WPM for the second time. He wanted to be absolutely certain he got the message through on this transmission in case there wasn't another chance.

This was the second time they had been chased by Zeroes since the Marines of the 1st Marine Division had landed on the island on the 7th of August 1942. In a fleeting moment Nate thought how glad he was that his J-47 straight key was bolted down to the small desk that sat under the frequency meter. He could loosen the wingnuts under the desk and take his key with him if he had to fly in another PBY but so far he had been assigned to the crew of the "Galloping Goose" and no one had noticed the bolt holes he had drilled one night when no one was around. He had tuned the key to his liking, and he planned to carry it with him everywhere he went.

But in fact, everything was bolted down everywhere since the PBY got slammed hard when it landed in the open ocean on swells, nothing like the smooth landings on the mirror-like waters at the seaplane base.

Luganville was the seaplane base established earlier in the Second Channel, created between the islands of Espiritu Santo and the New Hebrides Islands that gave the Catalina's strategic coverage of the planned operations beginning with Guadalcanal. The Marines and soon the US Army would island-hop through the South Pacific then turn north and eventually land on Japan's doorstep. The B-29's would finish the job from Tinian Island but that was years away.

Although Nate had tried to use the Navy's J-45 "leg-key" clamped to his leg, he despised the thing – his fist suffered with turbulence and every rapid, jerky movement of the aircraft. He prided himself on a crisp, clean fist and was known in the fleet in short order for attention to his sending. But that wasn't possible with a leg-key. That and his leg muscles were too big for a comfortable fit.

Once the CW message was received at Henderson Field's comm post Nate knew the F4F's would scramble if they hadn't already seen the enemy ship's movement on their CAP.

Each sector around the compass rose centered on the field was given to a flight of Wildcats for Combat Air Patrol duty and this early in the campaign for Guadalcanal the Japanese were still bold enough to try daylight runs to shore up their troops on the island. After the campaign settled

into long, drawn out months of combat and savage naval battles the troop movements would shift to operations under cloud cover on dark moonless nights.

It's curious how the mind works during moments of extreme danger – this flight was a prime example of combat stress reaction when Nate made light of his brush with death, turning it into a joke.

“Man, that was close. How did I get here?”, laughed Nate in a shaky voice as he jumped down off the plane with Lance Chadwick, the portside waist gunner, after they landed in the bay at Luganville.

“What do you mean?”, replied Lance, “we all got here the same way – we enlisted...”

Nate explained, “I mean – hey, I graduated at the top of my class at Radio “A” School in San Diego after Boot Camp and was supposed to get my choice of duty stations. They only said that it would have to meet the needs of the Navy. So here I am, in an airplane of all things and I almost got shot down in a PBY. What I really wanted to be was a Radioman on a destroyer, maybe a cruiser, or even a battleship. Holy cow – maybe even an aircraft carrier! But an airplane? Sheesh!”

“Well, you know what they say – there's the right way, the wrong way and the Navy way!”, Lance laughed, shaking his head.

Every boot in the Navy heard that one before they spent a full month becoming a Blue Jacket.

Lance had shown interest in Nate's work as a Radioman on the seaplane. He himself was a Gunner's Mate striker – a Seaman who was working toward the weapons rating in the Navy's hierarchy of jobs. Nate and Lance were the same age, 19, but Nate was already an RM3, a Radioman 3rd Class Petty Officer and obviously knew a great deal about the complex radio gear on board their aircraft.

When Lance had the opportunity, he would look over Nate's shoulder at his operation of the radio set and was particularly fascinated by the way he could work the telegraph key and communicate with other Navy radioman all over their area. When they were still in the seaplane base Nate occasionally let Lance listen in on his headphones to Morse code being sent which had the effect of deepening Lance's interest in radio communications. And on occasion, Nate would tune in stations in New Zealand and Australia which were intriguing – Lance had never heard such accents.

Nate readily shared his knowledge and enthusiasm for radio – the far-thinking machine gunner knew there was more future in radio than in his rapidly improving skill in shooting down enemy fighters. That is, if he survived the war which had just begun for their PBY, and so far, it was looking grim.

Although he was a fine marksman, honed by a boyhood in which he grew up hunting mule deer and elk in Colorado with his father, the main difference for Lance, other than the caliber of the gun, was that wild game didn't shoot back.

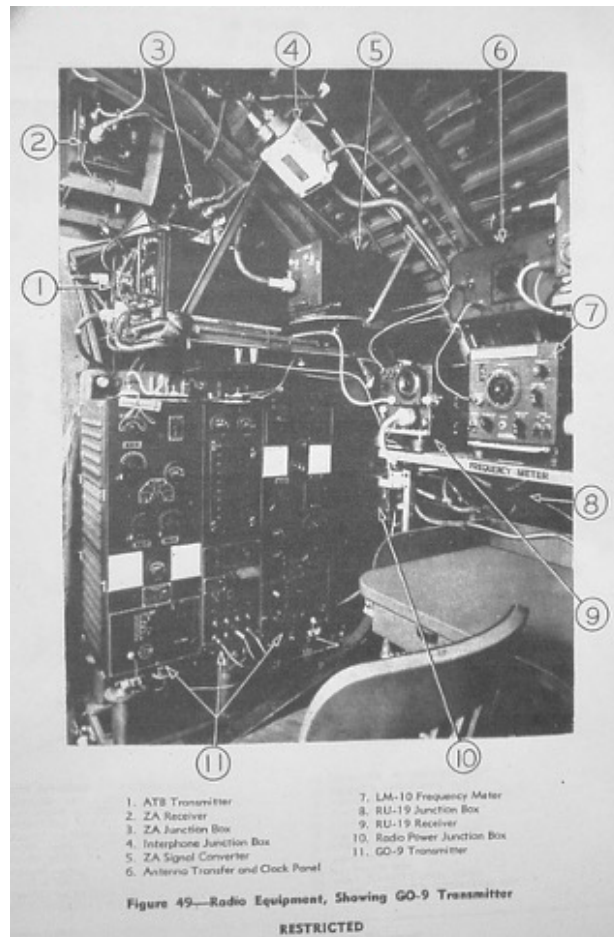
As they left the PBY and headed up the crushed coral path to the thatched roof over the open-sided enlisted men's place of refuge for a beer, Nate began to tell Lance how he got into radio in the first place...



PBY - Catalina Amphibious Seaplane



Luganville seaplane base



PBY radio equipment, Starboard side

Chapter 4 MIA July 4, 1943

“David, please - have another piece of pie!”

“Really, Mrs. Miller, I am about to burst – your apple pie is my all-time favorite, but I can’t eat another bite.”

Dave Francis was finally beginning to gain back some of the weight he had lost on Guadalcanal.

When Nate left for the Navy after Pearl Harbor, Dave stayed at home in Ohio for several more months, studying at Ohio University in Athens.

He missed the 80 meter CW rag-chews he had with Nate during High School days after he started college but those were a distant memory now – Parris Island took care of a lot of memories, pushed out of mind while he ground his way through Marine Corps boot camp in South Carolina.

At least he had the good fortune, if one could call it that, to join during the winter months and miss the heat and humidity of coastal South Carolina in the summer.

Dave's background, unlike Nate, did not help him when he entered the Marines. They did not check everyone coming into camp to see if they could copy Morse Code like the Navy did. Nate had been quickly ear-marked for the Radioman rating as soon as they learned of his skill and background – a trick that the military first used in WW I to put amateur radio operators into the new Signal Corps and short-circuit a lengthy process of turning unskilled men into military radio operators.

Back in 1914 they were still using wire telegraphy and spark gap radio equipment which wouldn't evolve to Continuous Wave wireless telegraphy for several years after the war.

And radio technology was critically important to ships at sea as the Titanic disaster had shown with devastating clarity.

But the Marine Corps did need riflemen, and a lot of them, so Dave left his college days and ham radio behind and took up a 1903 Springfield .30-06 as his new best friend. The classic M-1 Garand had become the standard issue rifle in November of 1941 but the Marines were slow to adopt it with a 30 year history of the Springfield.

The formation of the 1st Marine Division in 1941 soon included Dave as a Private and he made the long trip on board ship through the Panama Canal with "The Old Breed" up the coast to San Francisco.

They didn't know where they were headed until the Golden Gate Bridge was put to their troop ship's rudder and weeks at sea had passed, then they were told they were steaming for Wellington, New Zealand.

It would be much later that they learned they would make the first American land assault of World War 2 on a remote island in the Solomon Island chain in the South Pacific – Guadalcanal.

After an unopposed landing on Red Beach, the Marines established themselves close to the new airfield that was under construction by the Japanese in their relentless push to spread The Greater East Asia Co-Prosperity Sphere around the Pacific. Once the airfield was complete, the Imperial Japanese Naval Air Service would be able to cut off Australia and New Zealand from the US and enable their capture without interference.

Henderson Field, as it was soon named after a Navy fighter pilot, became a fiercely contested piece of real estate from 7 August 1942 until early 1943.

The 1st Marine Division would win fame and glory at terrific cost in the first battle of the Pacific with Japan and Dave was in the thick of it. Guadalcanal marked the end of the advance of the Rising Sun in the South Pacific and brought thankful relief to the citizens of Australia and New Zealand.

During the Battle of Edson's Ridge in mid-September (called 'the battle of bloody ridge' by the Marines who fought there) Dave was shot through the thigh by an Arisaki rifle bullet. The 7.7mm round passed cleanly through his leg without breaking bone - he was bound up and kept in the fight until the battle cleared.

Malaria was rampant on the island and Dave, with many others, got sick despite the quinine they were fed and by the time the 1st Division left the island at Christmas for Melbourne, Australia, and R&R, he was headed back to the US for recovery.

When he finally got home to southern Ohio his weight had dropped from 197 pounds of muscle to 140 and his uniform hung on him like a scarecrow.

It was the 4th of July and Dave had come over to Nate's home to have dinner before he left to return to active duty.

Charlie and Marge Miller were subdued yet happy to see Dave.

A month before, a knock on the door of their modest home on Church Street brought them the Western Union telegram – a most unwelcome message - but not the worst possible.

It read,

"The Secretary of War desires me to express his deep regret that your son NATHAN HALE MILLER RADIOMAN 3C has been reported missing in action since April 15, 1943..."

Since that time, they had no further word on Nate. Charlie and Marge were devastated, at the same time hopeful and Dave's visit helped in a bittersweet way.

Dave tried to reassure them that Nate was the kind of guy who could handle himself and if anyone could beat a bad deal it would be him. They had played football together in High School and Dave knew his tall friend had the grit to deal with difficulty and survive. And Dave had known about Nate's Shawnee Indian ancestry – in fact, he had studied early American History in depth and knew what the character of Tecumseh meant to the tribe. He secretly thought if Nate was alive that he would draw on the strength of his blood ties to his people, even if he was quarter Shawnee. Grit, indeed...

Mrs. Miller's eyes teared up as Dave walked to the front door and she pulled him tight for a hug and said, "God bless and keep you, David".

Charlie brought Marge close and put his arm around her as they walked back into the dining room where Marge started clearing the table. Charlie picked up the pie and took it to the kitchen.

“Dear, I need to go in early tonight, I am going to contact TJ in Flagstaff if I can get a wire set up”, Charlie called as he left the kitchen.

TJ and CW (Charlie’s signature call sign on the railroad telegraph system) had struck up a friendship after Nate had passed through Flag on his way to Navy boot camp. CW had received the message Nate asked TJ to pass back along the line and as a result the two lightning slingers had bonded over the wire via Morse code.

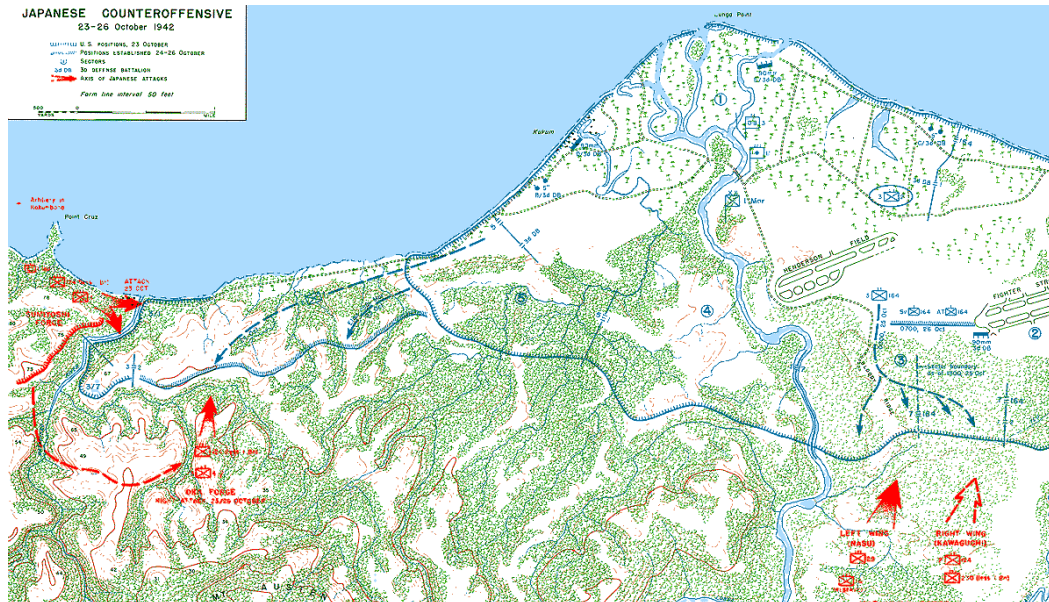
Once in a while despite the heavy traffic across the divisions, they had managed to get a circuit set up that allowed them a short chat. This was only possible at night hours that covered both Ohio and Arizona, so TJ had to come in very early to make it work and it did not always happen. And when it did, it was because so many of the operators knew the story and were willing to bend the rules a bit for fellow card-carrying members of the Order of Railroad Telegraphers.

TJ had been struck by the young man when he showed up 7 months earlier in Flagstaff and asked him to pass along a message to CW. Something about Nate’s poise and bearing made an impression on him and he had remarked to Sally that evening at dinner that he wondered how things would go for him in the Navy and the war.

Now every operator from southern Ohio to Flagstaff knew of Nate and there were many who listened in on the chat when it happened. A lot of telegraphers were thinking of Nate somewhere missing in the South Pacific.

Tonight, CW would pass on no news about Nate, but he would briefly tell TJ about Dave Francis and his visit.

Charlie kissed Marge goodbye and quietly walked out the door, headed to Musselman Station...



Battle of "Bloody Ridge" on Guadalcanal, September 12-14, 1942.





Chapter 5 Shot Down March 27, 1943

“They bought our scrap iron and fired it back at us...”

W.E. Houf, 2ndLT USMCR
Guadalcanal 1942

The 20mm cannons on a Mitsubishi Zero fighter aircraft were the opposite of the .303 caliber machine guns mounted on the airplane. They fired more slowly but packed a massive punch – you just had to be close enough for them to be effective.

Zero pilots often used their machine guns to register hits on an enemy aircraft and when they were successful, they quickly switched to the cannons for the kill shot.

So it was on the first two occasions at the beginning of the battle for Guadalcanal that Nate’s PBY was just lightly damaged – only the 7.7mm machine gun rounds penetrated the aircraft and the Zeroes overshot the Catalina before they switched to cannons.

The first Zero on the second attack met its fate by the Gunners Mate striker, Lance Chadwick.

The third attack happened while the Galloping Goose was flying a patrol near Bougainville when things changed for the worse.

This time the Zero pilot was skilled in the art of aerial warfare and came in from the sun and above the PBY. He held his fire until he was within 500 yards at almost 300 miles per hour and

gave a short burst from his two guns, confirmed he was hitting the pylon holding the wing to the fuselage then let loose with his two 20mm cannons.

Not a shot was fired in return as the Catalina dropped like a rock toward the sea, its back broken and the engines on fire.

The pilots struggled with the controls, pulled back with all their strength on the yokes and managed to lift the nose enough just in time to splash into a swell that was rising to meet it – the result was a sudden stop and a tremendous crash. The nose of the PBY was buried in water, flooding the fuselage and swamping the front half of the airplane.

Both pilots were killed at impact along with the flight engineer who died in the cannon fire.

Nate was knocked unconscious along with the two waist gunners.

The other crew members were nowhere to be found, presumed dead in the crash and never seen again.

Nate came to, floating inside against the top of the fuselage with the two gunners who were struggling to free themselves from the debris.

The air pocket they were breathing was closing rapidly as the water rushed in and their only chance was to swim down into the plane and exit from the blister on either side. This meant they had to clear the .50 caliber machine guns from the opening first then swim out for the surface.

Their one piece of luck, other than surviving the crash alive, was that the life raft also tore free from the wreck and floated to the surface near them, automatically inflating into shape.

The tail of the PBY was half above water at a precipitous angle, rising and falling with the swells.

Nate and the two gunners swam to the life raft and held on to the sides, catching their breath and building their reserve of strength to heave themselves over the rubber sides and into the raft.

Nate flopped over the side first then hauled Lance in after him.

The starboard waist gunner was struggling, slipping back into the water. His eyes were glazing over as his hands relaxed their grip on the rubber raft.

He gurgled incoherently as he tried to speak to Nate, then slowly sank into the ocean, lifeless eyes looking up at the surface as he disappeared in the water.

“What happened to Tom?”

Lance was gasping for breath and looking over the side of the raft at empty ocean.

“I don’t know – maybe he slammed into the machine gun stanchion when we hit?”

Nate slumped back into the raft as they both rested from their hairy escape from the PBY and the struggle to get into the boat.

His mind beginning to clear, Nate began to think about their situation and took stock of what they had. He looked around for the paddles and found them, and the can of water – the most precious asset in the raft was where it was supposed to be – and then he spotted the Gibson Girl.

“Ah”, thought Nate, “we aren’t in as bad a shape as I feared...”

Lance watched Nate cradle the Gibson Girl in his arms and a faint smile came across his face.

Now a Gibson Girl was the ideal of beauty as drawn by the artist Charles Dana Gibson during the late 19th and early 20th century – voluptuous curves with a wasp-like waist was a significant feature at the time and the designers of the emergency radio beacon used a most practical form factor that resembled the narrow waist. The proper use of the radio involved holding it between your thighs and cranking the handle on top which turned the internal generator that would put the automatic beacon transmission out over the airwaves. If the operator knew Morse Code, there was a pushbutton on the front panel that would allow the castaway to key the transmitter on 500KHz.

Any ship or airplane was required to monitor the 500KHz frequency for just such an emergency and using their Radio Direction Finding receiver they would be able to locate the raft within a 200-mile radius.

That is, as long the 300’ antenna wire was sufficiently high which could be accomplished with the balloon or kite that was included as part of the kit.

The PBY had been shot down close to the shore of Bougainville which was a hotbed of Japanese activity after the successful defense of Guadalcanal. Although Henderson Field had now been denied them, the Japanese knew they would need an airfield of suitable size in the region to defend their holdings and they planned to expand their position on Bougainville.

Nate knew if he set up the beacon while they were drifting 15 miles offshore, he very likely would draw the attention of not only a friendly rescue but a hoard of enemy aircraft who would attack his rescuers – he did not want to become bait.

A 15-mile paddle in the current offshore to Bougainville would not be easy but they could see land and knew that great stretches of the island were uninhabited or inhabited by islanders that might be friendly.

Usually Melanesians were easily persuaded to join with the Americans but in some cases, it was a crapshoot and you had to be careful how you approached them before you made a fatal mistake.

“Lance, we need to get this raft to the shore and hide on the beach. Once we get there, we can figure out how to get help with the Gibson Girl. I will send code and we will work it out from there. And if we are extremely lucky, we might be able to join one of the Coastwatchers...”

Lance was in no mood to argue and with that plan they started stroking the too-short paddles toward Bougainville...



A Gibson Girl sketch
by Charles Dana Gibson



The BC-578 Gibson Girl
Morse code key button upper right



Proper use of the Gibson Girl

Nate's PBY crashed off the bay on the west of the island...



Chapter 6 The Bay March 28, 1943

*"To the forces, as they approached, Empress Augusta Bay presented a magnificent but somewhat terrifying spectacle. Behind the curved sweep of the shore line, a heavy, dark green jungle...swept up over foothills and crumpled ridges to the cordillera which was crowned by a smoking volcano, Mount Baranga, 8,650 feet above sea level...It was wilder and more majestic scenery than anyone had yet witnessed in the South Pacific..."*¹

That description could have been written by Nate after the two sailors paddled their life raft across the current and into the breakers crashing on to the beach at the north end of the bay.

In another seven months, a landing force would come ashore to establish the base from which the US forces would mount their continued attack on Rabaul, the big Japanese base further up the island chain from which the enemy controlled the entire area. The strategic goal of the US and allies was to conquer Rabaul, neutralizing Japan's ability to extend force by air and sea.

But on this evening, the bay was barren and largely ignored due to the fact that the Japanese had built their bases on the north, east and south coasts of Bougainville and left the west side to the jungle.

This was both a curse and a blessing for Nate and Lance.

No one was around – no islanders, no Japanese but it also meant no Coastwatchers nearby on this side of the island.

Once they pulled the raft off the beach and had it hidden under foliage in the jungle, they sat and rested.

Neither spoke a word.

The drinking water from the raft was long gone but there was a river not far from where they landed that had fresh water that came down from the mountain – actually a smoking volcano that towered over the center of the island.

Coconut palms grew right up to the water's edge, over 100' tall, leaning out over the beach which gave some measure of protection from the air – and a source of food.

Nate looked at Lance and his gaze fell on the knife in the sheath on his belt - a Marine standard issue Ka-Bar that he had traded for on Guadalcanal a month earlier. The Marine 2nd Division was better equipped than the 1st Marine Division when they were relieved in late 1942, and their PBV often landed on Henderson Field for refueling.

Trading equipment, swapping gear and souvenirs and the general art of cumshaw² was rampant in the South Pacific.

Somehow Lance had managed to keep the Ka-Bar on his belt through the crash and the swim out of the aircraft.

The coconuts on the beach were rotten.

Or eaten by the monstrous coconut crabs that could span 3' across and crack open a coconut with their pincers.

"Lance, let me have your knife and I 'll climb up and knock down some coconuts and we'll eat."

It was a long climb and shredded his dungarees but successful. Lance simply had to stay out of the way as the coconuts rained down.

As Nate climbed, he thought through their options on Bougainville.

He wasn't sure exactly how many or where the Coastwatchers were located on the island.

Most of these men had been plantation owners or managers before the war and were Australian with few exceptions. One, Paul Mason, was especially adept at maintaining his radio equipment, called a "teleradio" set. He had been an Australian amateur radio operator and knew his gear inside and out. He was near Keta on the east coast of the island. He would be resupplied by moonlight air drops from PBV's and was constantly on the alert for enemy patrols who knew he was somewhere on the island. His CW transmissions were correspondingly brief so the Japanese couldn't use their Radio Direction Finders to pinpoint his location. He moved as often as necessary to hide his radio.

Others were less adept but all of them hidden in their high locations were keen to watch the Japanese air and sea movements providing invaluable information for the allied forces. Often, they were chased by Japanese patrols and their courage, performance and adaptability were warmly commended by the high command in the Pacific.

An early warning of approaching bombers with their fighter escorts gave time to send up US sorties that could gain enough altitude to slash through their flights before hitting Guadalcanal.

Nate knew the teleradio operating frequencies were well above the 600 meter wavelength of the Gibson Girl's transmitter so contacting them directly would be out of the question.

And he knew also that the range of the BC-578 was greatly diminished when it was used on land – the 300' wire antenna worked best when it was vertical over saltwater with the counterpoise dangling down in the ocean.

On their first night on the beach on Empress Augusta Bay they had been scared when a Japanese patrol boat slowly motored along the Bay, flashing their searchlight against the palms on the shore. They had barely enough time to scramble further into the jungle before the boat came abreast of their location.

And Japanese Kawanishi floatplanes would occasionally cruise over the Bay which could also easily spot them if they were on the beach attempting to operate the emergency transmitter.

Nate considered the situation and decided their best opportunity lay in the use of sending Morse code on the Gibson Girl and to do so he would have to figure out the most efficient way of rigging an antenna.

The unit came with a spare antenna wire which would give a total of 600' of antenna but it would not be anywhere near vertical.

The transmitter only put out about 5 watts max when the generator was steadily cranked at 80RPM.

The solution he came up with was to use an antenna he had played with as a ham radio operator that worked well on 160 meters – the 1.8Mhz shortwave frequency that was just above the commercial AM broadcast band on everyone's radio back home.

Twisting the two coils of wire together tightly after scraping the ends of each with the Ka-Bar, Nate climbed a tall coconut palm tree with the wire and dangled one end down to Lance to pull back into the edge of the jungle where they had stashed the raft.

Nate looped the wire with a twist and hung it on a palm frond as far out on the tree top as he could reach – at this point he was high above the edge of the water.

Climbing down the tree he carried the wire to another palm tree 100' up the beach and continued to string 400' of wire like a strand of Christmas lights until it drooped like a sagging telegraph wire between poles nearly 100' above the beach.

Now he had to deal with the counterpoise which had to be in saltwater as much as possible to work effectively. He took the last 100' of wire and twisted it to the counterpoise wire in the Gibson Girl and waded as far out from the beach as he could go, using rocks to sink the wire.

This was done just prior to sunset when they figured they had the best chance not to be spotted.

They were rewarded with one of the most glorious sunsets they had ever seen. And the quickest, too, since the sun sets with amazing speed in the South Pacific when viewed over vast ocean spaces.

Lance sat down on the fallen coconut log, gripped the Gibson Girl between his legs and began to turn the crank. After a minute or so the SPEED INDICATOR lamp came on indicating all was well with the generator creating the low voltage for the two vacuum tubes inside. One tube was for the audio oscillator that created the 1KHz tone for the modulated CW signal that was transmitted by the other tube.

Nate hoped he would be able to tune the transmitter to the antenna system – this was a crude version of an "Inverted L" type that he had such good luck with as a ham – but it was merely a guess as to the antenna coupling match he could achieve and that, in turn, would determine how much signal he would produce.

All they needed – no, all they wanted – was enough signal for a passing airplane, ship or submarine to hear them. Enough, but just enough was the goal.

Tuning the antenna load control, they saw a faint glimmer on the TUNE TO BRIGHTEST lamp which grew a bit brighter as Nate tweaked the knob over to its maximum range. Even a bad antenna match would put out a watt or two and that could be all it would take on 500KHz.

They were in business – Nate had been pondering whether to put the transmitter in auto and send the message that Radio Direction Finders could hear, or to use manual Morse code to send a rescue request.

He thought of the decision in light of shooting tracers in combat – unfortunately, they worked both ways – yes, you could see where your rounds were striking, but they also showed where you were.

Rather than expose themselves to the Japanese RDF efforts that were trying to find Paul Mason and the other Coastwatchers on Bougainville, Nate decided to resolve the issue by using his code skill and keeping his transmissions very brief.

Nate limbered up his wrist and started to send CW on the manual key...

¹ ***History of United States Naval Operations in World War II*** pg 259; a 15-volume account of the United States Navy in World War II, written by Samuel Eliot Morison

² **“cumshaw”** - “It was probably British Navy personnel who first picked up *cumshaw* in Chinese ports, during the First Opium War of 1839. *Cumshaw* is from a word that means "grateful thanks" in the dialect of Xiamen, a port in southeast China. Apparently, sailors heard it from the beggars who hung around the ports and mistook it as the word for a handout. Since then, U.S. sailors have given *cumshaw* its own unique application, for something obtained through unofficial means (whether deviously or simply ingeniously). Outside of naval circles, meanings of *cumshaw* range from a harmless gratuity or gift to bending the rules a little to outright bribery.” Merriam-Webster Dictionary.

N.B. – as a US Navy sailor, I used this technique on the missile submarine I served aboard, especially when we were in port during refit alongside the submarine tender...



Coconut palm on the beach



Captain Martin Clemens (rear center), a coastwatcher on Guadalcanal, provided intelligence to Allied forces during the battle for the island (August 1942 – February 1943). The men with him were all members of the Solomon Islands police force.

NOTE

It is absolutely essential to maintain an adequate ground when transmitting.

PROBABLE RANGE OF RADIO SET

Location	Distance in Miles
At sea	250 to 500
In boat (center of inland lake)...	50 to 150
At edge of lake or large stream (ground lead in water)*.....	30 to 50
On land (ground lead buried in moist earth)*	5 to 10

* The TUNE TO BRIGHTEST indicator may not function under these conditions. Use all the antenna wire and tune to the mark on the dial.

d. Set the transmitter in the bottom of the boat or life raft (if on water) ready to be secured to the operator later by means of straps provided at the sides of the unit.

e. Kite M-357-A or Kite M-227-A is individually packed in a long cylindrical package in accessory Bag BG-109-A of the radio set. Remove the kite and lay it crosswise on the lap. Holding the kite securely with



Figure 15—Kite M-277-A or M-357-A, First Expansion Operation

one hand, reach the other hand in through its center. Push outward on the hinged spider to make the four upright longerons spread. When these have been suffi-

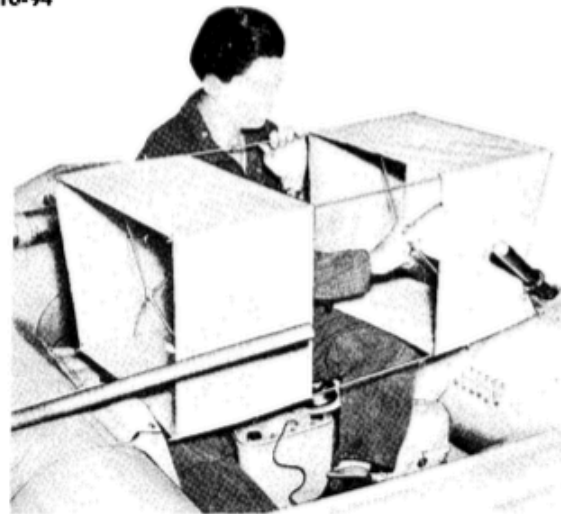


Figure 16—Kite M-277-A or M-357-A, Second Expansion Operation

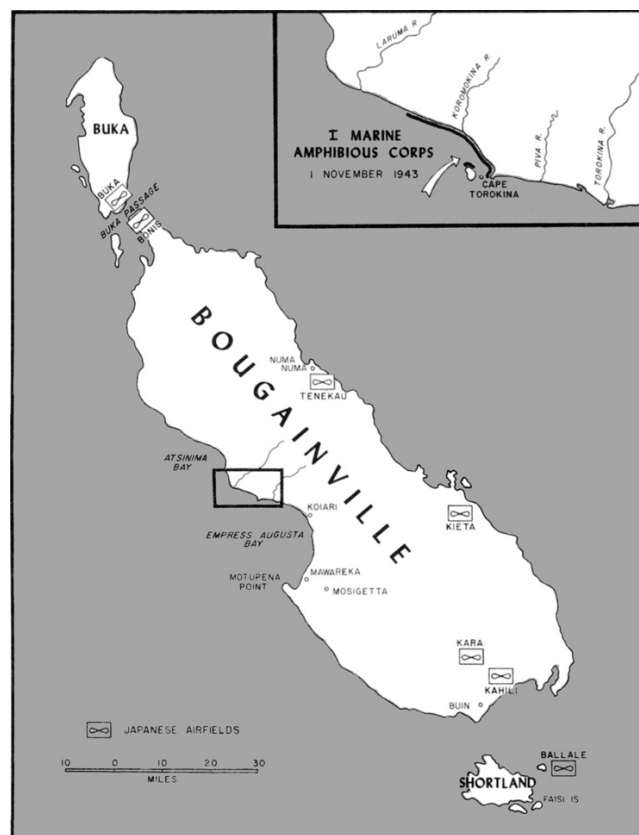
ciently extended, they will lock into position. Repeat procedure for opening opposite end of kite. Stop pushing on the spiders just as soon as you feel them jump. The process may be thought of as similar to that of opening an umbrella (see figs. 15 and 16).

f. If you have Kite M-357-A (part of Radio Set SCR-578-B) which is divided in two, assemble by fitting the ends of the four longerons on one half into their respective sockets on the other half (see fig. 17) before proceeding with the instructions above. Be sure that the halves are pressed tightly together so that the locking mechanism holds them firmly in position. After assembling the kite, estimate the wind velocity. There are two eyelets on the kite, one at a corner marked "15 to 40 mph" and another further in near a marking "7 to 20 mph." Affix the antenna-wire swivel clasp into whichever of these two eyelets more nearly corresponds to the estimated wind velocity (see fig. 18). If in doubt, use the eyelet indicated for low-wind velocity. Exercising due caution, attempt to rise sufficiently in the boat to get the kite in the air without its falling into the water. The kite will be found a ready flyer in winds as low as 7 miles per hour. Always maintain a steady tension at the BRAKE to prevent the kite from dropping. On occasions it will be found more practicable to play out the wire by hand. For most efficient operation, play out ALL of the 300 ft. of antenna wire on the reel. Any reduction in length means a lowered efficiency of the transmitter. Make sure the antenna is not less

Gibson Girl range of operation



Coconut crab of the South Pacific islands



Empress Augusta Bay, Bougainville South Pacific and the Marine's attack later in November, 1943

Chapter 7 The USS Ray SS-271 April 1, 1943

Tom Chittenden came from good New England stock.

His family name stretched far back along the coast of Connecticut and more than one had seen the South Pacific on whaling trips in the 19th century.

Chittenden's went to sea. That was it. It had been so many years since a male member of the family did not go to sea that it caused a kerfuffle when young Tom announced he was going to work for the railroad. Or, to be more specific, Tom wanted to become a railroad telegraph operator.

The year was 1937, Tom was 19 years old and had already been off the coast on a fishing vessel for 2 years. He loved the sea, as all Chittenden's must, but he had been exposed to telegraphy by the lighthouse keeper who also worked an occasional shift at the town's train depot.

Tom had been befriended by Les, or "LL" as he was known on the railroad since his father and Les had gone to sea many years before during the first world war. And for some people, telegraphy seemed to get in their bones and when they heard it, they knew they were going to be part of it.

Many young men from the same towns sailed together on the same ship – at that time the US Navy went out of its way to keep brothers together on ships as well as friends from the same town who enlisted at the same time.

That Navy policy remained in effect until the 5 Sullivan brothers who served together on the light cruiser Juneau were all lost in November of 1942 when the Juneau was sunk in a ferocious naval battle off Guadalcanal.

Les had suffered a serious leg injury when a mine exploded under their ship in the English Channel and he no longer went to sea. He had been a Radioman in the Navy and it was an easy transition to American Morse code when he returned home to work on the railroad.

The lighthouse keeper's job was easy on him now as he aged since the Port Chester lighthouse was on a hill above the coast and there were few steps for him to negotiate.

And as a widower he filled in his spare time keeping busy at the railroad depot, spelling the shift operators whenever they needed time off.

Tom informed his parents that he would be taking up railroad telegraphy and despite their disbelief and the row it caused in the extended family, he became a night shift operator on the Coast Line RR until Pearl Harbor.

It did not take long for the 23-year-old to enlist and be discovered by the Navy for his facility with Morse code. He scored well enough on the International Morse code test in boot camp to be selected for Radioman school and he passed through San Diego not long after Nate.

By 1943 Tom had made Radioman 2nd Class Petty Officer and was serving as one of three radiomen on board the USS Ray SS-271 operating off New Guinea as a radar picket submarine.

The Ray had its first successful patrol sinking several ships when it started its second war patrol in early 1943.

Tom was at first skeptical about a submarine built in Wisconsin but after qualifying aboard the boat his concerns were allayed and he felt comfortable – even if it wasn't built by the Electric Boat Company in Groton, Connecticut.

Chittenden was one of the somewhat uncommon Radiomen of the war who was thoroughly competent in both American and International Morse code. Only those who came from the railroad and became Navy RM's would know both.

So it happened on the moonless night of 1 APR 43 as the Ray was surfaced off the coast of Bougainville that Thompson, the RM3, was listening to the RAK receiver when he heard a faint, very faint signal come up on 500 KHz, the emergency distress frequency that every ship and aircraft monitored for those lost at sea – shot down, sunk – however they wound up stranded with a Gibson Girl transmitter in a rubber life raft.

Thompson closed his eyes, leaned in toward the receiver and clasped his hands over his headphones to shut out the noise of the diesel engines running to recharge the batteries.

There – he heard it again, this time a little stronger, a little more readable, “S dit dit S S dit dit S WST BA di-dit di-dit BGV daaaahhh” and repeated until the signal dribbled off into the ether.

“Hmmm.... I wonder what that was?”

Thompson could make no sense of what he heard and thought for a moment it might be the enemy interfering with the emergency system.

But the signal strength was so light - and then the weird code characters certainly weren't part of the Japanese code system, either, because he had heard enough of that to know the sound of it.

And the fist of whoever was sending that code left a lot to be desired, too – instead of good clean sending on a straight key this sounded like someone struggling to send code who knew what he was doing but having trouble keying the transmitter.

“Hey, Tom – take a listen to this, will you?”

Tom switched focus from the little radarscope and let Thompson scan the surface as he picked up a pair of headphones and listened on 600 meters.

After a minute or two, there it began again, very faint but readable - "S dit dit S S dit dit S WST BA di-dit di-dit BGV daaaahhh"

He had clear copy on the signal now, but it didn't make sense. It was partially International Morse code, but then it wasn't.

Hearing the signal again, he furrowed his brow and concentrated on the sending – then it clicked.

Someone was sending in both codes – International and American!

The message then translated "SOS SOS WST BAY BGVL".

"Lieutenant! I have an emergency distress signal coming through on 500Khz!", Tom called into the control room.

Lieutenant Jantz called up to the conning tower and the skipper of the boat came down into control, leaving the XO topside.

"What have you got, Sparks?"

"Skipper, someone is calling, very faint, and sending an SOS and adding WST BAY BGVL, but he is doing it in both American and International Morse code. It would seem he is trying to encipher the message, so they won't understand what he is saying. You know, maybe a homebrew kind of code that only we would understand – that is, if you knew both codes."

"Hmmm.... WST BAY BGVL is pretty clear to me – he must be on the Western coast of Bougainville and the only bay around there is the Empress Augusta."

"Let's see if we can lock him on the Radio Direction Finder if he transmits again."

The RDF loop on the conning tower was tuned up and they began to scan the bearing toward the Bay, now about 10,000 yards off.

The signal came on again and with careful attention to the RDF Thompson got a bearing on him.

"Captain, he is 85 degrees from true north – abaft the bow!"

The skipper went to the chart table and with Lieutenant Jantz plotted the course from their position to the northern end of the Empress Augusta Bay.

“Lieutenant Jantz, set course 090 and make 5 knots, we’ll give a look.”

The boat slewed around to starboard and a trail of glittering phosphorescence rolled out in its wake...



Submarine radio shack – WWII



USS Ray SS-271

Chapter 8 Iwamoto April 2, 1943 1400Z

Nate’s strategy for rescue wasn’t a bad one, given the circumstances.

He feared using the Gibson Girl in automatic mode because of the length of the transmissions which he could not shorten. In Automatic mode the transmission was two segments of 20 seconds each so the enemy RDF would have 40 seconds to home in on their position. And if he sent his code by key, he could send his message in a fraction of that time, be less susceptible to detection and give enough information that a friendly force could find them.

That is, if he could find another Radioman in the Navy that knew American code.

At least it was worth a try.

Had they been stranded far out in the ocean it would have been appropriate to seek help in Auto transmission mode but here they were in fairly good shape, all things considered.

They had potable water from the river they drank from coconut shells, they had coconut meat in abundance and with a fire they had roast crab.

Lance had gathered the hairy fuzz from a few coconuts and striking the back of the blade of the Ka-Bar fighting knife against a piece of steel liberated from the life raft rings, he was able to fan the sparks into a small fire.

Roast crab was delicious at first – but a steady diet of crab, coconut and river water began to take a toll on their digestive systems.

The mosquitoes were altogether a different issue and like many of the islands in the Solomon's they were malarial. Both Lance and Nate would come down with severe cases of malaria before their ordeal would end.

In the 1960's both men would be found outside in the summer in their backyards under blankets on a cot, sweating and shaking uncontrollably.

Still, all in all, they made do much better than so many others who had been shot down and set adrift for days or even weeks before being rescued.

Sending the combined American/International Morse code truncated message would probably have been a truly clever means of being rescued but for one man.

Kiyoshi Iwamoto.

Having been raised in an affluent family with ties to the Mitsubishi *zaibatsu*, he had expected to be treated with unusual preference when the war with the US started with the attack on Pearl Harbor.

A promising law student at university in Tokyo, he was drafted into the Imperial Japanese Navy in 1942. His ambitious plans were thwarted by the guile and maneuvering of a jealous superior and rather than being appointed to the Imperial Japanese Naval staff in Tokyo, he wound up on a patrol boat in the South Pacific – “to get some experience at sea”, he was told.

He served as the Navigator and Radio officer on board Patrol Boat Number 38, formerly the destroyer *Yomogi* but now well past her prime. No. 38 had been commissioned in 1922 and like the other patrol boats was relegated to coastal patrol duty, although still heavily armed and capable.

Iwamoto's arrogance and self-centered nature meant he would rapidly become disgusted with the entire war and the result was that he was sullen and irritable. He was distant and not well liked by the other officers and crew of No. 38.

He also had not bought in to the Emperor worship of the Bushido tradition of the time and certainly did not intend to die valiantly for him if he could help it.

Iwamoto had been a keen participant in technology in his younger life and had become an amateur radio operator (J1KL) in his early school days. He operated 20 meter CW with his Yagi-Uda beam antenna pointed toward the US and enjoyed short chats in Morse code. He knew rudimentary English from school language classes and texts he had obtained, and, in the shorthand abbreviations that all code operators used, he could hold a tolerable rag-chew with the Americans.

Several years of DX operation on 20 meters made Iwamoto knowledgeable in the manner in which the Americans abbreviated everything – really all one had to do was think about adding vowels to words in between consonants and – presto – with a good English-to-Japanese dictionary, you could figure out what was being said. One did not have to be fluent in English to communicate via telegraph code.

And English was the global universal radio language and had been for years when you worked DX. If you weren't talking long distances via shortwave radio in radiotelegraph code to foreigners, you used your own local code and abbreviations. Japanese telegraph code was far more complex than either American or International Morse code and would require special training of rather unique operators from the western world to learn and copy. Japanese code-breaking in the South Pacific theater depended upon these individuals.

So, when Yamaguchi brought him the pencil scribbles at 0300 local time and asked him what he thought of it, he snatched the paper out of his hand and held it under the battle lantern on the bridge.

The Lieutenant looked at the English letters, "S dot dot S WST BA dot-dot dot-dot BGV long-bar" and hummed to himself. The dots were pencil dots representing code characters Yamaguchi did not recognize.

He was used to seeing various American code ciphers, but he had never seen anything like this.

Iwamoto took the pencil out of Yamaguchi's hand and laying the paper down on the chart table he rewrote the line of letters across the page like a westerner and drew vertical straight lines between each, leaving a longer space where Yamaguchi indicated a new letter began.

He then took out his English alphabet and scanned down the list, fitting each letter into the dot, dot-dot and the long bar, a dash.

Nothing made sense until he came to the letter O.

“Ah, of course! The American is sending an SOS, which makes sense...”.

Yamaguchi had said he was copied on the distress frequency 500KHz which the Japanese also monitored.

Moving on he fit every letter, one by one, into the two characters for the double dot-dot and stopped when he got to Y.

The last letter was trivial by this time, BGV with one more letter had to be L and it meant Bougainville.

Iwamoto smiled to himself, smug in his code-cracking effort and asked Yamaguchi to tell him how this American sounded when he heard him.

“A very weak signal, Lieutenant, hardly enough to hear and I only had acceptable copy once before he quit.”

“Can we use the RDF to locate him?”

“I do not think so – he only occasionally transmits very briefly on no set schedule and his signal is too weak.”

“Then we will patrol further up the coast and take a very hard look at the Bay...”



No. 31 - Class Patrol Boat Imperial Japanese Navy

Chapter 9 The MK 14 April 2, 1943

The deep ‘*thrummm*’ of the diesel engines on the USS Ray carried far across the water in the pitch-black darkness of the night.

It is remarkable how far both sound and light carry across water.

At periscope depth at night, even lighting a cigarette in the control room could carry up through the periscope mirrors and be seen from miles away as a pinpoint of light.

That’s why submarine control rooms are kept lit with subdued red lighting and men cup their hands closely around their Zippo lighters, first calling out “bright light” before they light up. Everyone in control shuts their eyes during the flareup so they don’t lose their night vision.

But there is no mistaking the sound of a submarine running on the surface at night – the Fairbanks-Morse 38 was the workhorse of the fleet and once a sailor heard four of them pounding away, recharging the batteries on the surface, he would never forget it.

Nate and Lance looked at each other over the small fire they had kindled in the sunken fire pit in front of the raft. The raft now had become one side of a lean-to, the back facing the beach and covered with palm fronds and the sides filled in with more fronds. It was invisible from the beach.

Straight out of the Boy Scout Handbook which turned out to be a good primer for field craft in war.

“You hear that, too?”

Lance nodded and they tried to look nonchalant, but they were PBY sailors and had only heard a few submarine diesels in their time in the Navy.

“I am willing to bet our first cold beer back at Luganville that that is one of our boats and they’ve heard us”, said Nate.

“How do we make contact with them if we can’t receive on the Gibson Girl?”

“Well, if we can confirm it’s one of our boats, we can use the signal light on the thing... I can send code with the manual key and we can read their signal lamp, too.”

Lance tried to look hopeful...

_____ - - - - _____

The skipper of the Ray had just heard from Tom Chittenden on the SJ radar that they had a contact, bearing 160 degrees, range 15,000 yards.

At about the same time Patrol Boat 38 detected the Ray on their radar.

The Commanding Officer of the SS-271 was by now an old hand at crash diving his boat. But he hesitated to dive until he knew what he was dealing with – the range to contact gave him a few minutes for contemplation.

“Chittenden can you tell anything about the contact?”

“It is clearly some kind of small surface ship, maybe a destroyer, making about 10 knots up the coast.”

That was all the captain needed to hear and he commanded “Dive the boat”.

The klaxon sounded and the conning tower was cleared in less than a minute as the boat dived.

“Five degrees down bubble - make your depth 60 feet, make turns for 2 knots”.

The boat stabilized as they turned away from the path of the ship which now had picked up speed.

At this time, they still didn’t know what they were dealing with, but the behavior of the contact suggested some kind of patrol craft. Certainly, it would be heavily armed on deck and carry depth charges at a minimum.

Lieutenant Commander Tinsdale wasn’t worried as much about torpedoes on a small surface ship as he was the depth charges, although the Japanese Long Lance torpedo was far more effective than the Mark 14’s carried in the US fleet.

By this time in 1943 improvements had been made on the Mk 14’s and although they weren’t totally reliable, Tinsdale had become more aggressive in his tactics with growing confidence that he could sink what he hit.

Earlier in the war, the Mk 14 torpedoes were so unreliable they bounced off enemy ships, exploded prematurely, ran way deeper than set and in a few cases, circled back and sunk the boat that fired them.

These problems were finally being fixed and the skipper now intended to go in harm’s way with confidence.

Nate and Lance would have a ring-side seat.

The Patrol Boat began active sonar pinging and finding a target headed straight for the Ray.

The skipper knew that the depths off the sides of volcanic islands dropped precipitately in just a short distance from shore – it had been possible to sit at periscope depth just 100 yards from shore on other islands and the volcano on Bougainville was just a few miles inland from where they were. It would be very deep just offshore the Bay.

Based on this knowledge and a taste for aggressive combat tactics, the captain maneuvered his boat until it was nearly up against the drop-off into deep water on the beach.

At this point he was 200 yards offshore and at periscope depth but close enough to shore that the bottom clutter interfered with the return signal of the sonar and the Patrol Boat slowed down to a stop.

Lance and Nate now clearly heard the sound of an entirely different marine engine turning over slowly, practically on top of them. They barely breathed as Nate kicked dirt and sand on the fire.

The periscope of the Ray just broke the surface of the water and the skipper quickly scanned the area for any evidence of the Patrol Boat. He rotated the handle from low to high magnification and scanned slowly around once more.

Now it is the nature of things that sometimes the most trivial cause merits an outsized consequence.

In this case, it was the same battle lantern Iwamoto used to decipher the distress signal – the shade over the lantern that was supposed to focus the light down and under thus keeping it undetected from outside the bridge had a small hole in it.

The Patrol Boat was initially commissioned as a destroyer in 1922 but had been reconfigured as a Patrol Boat and relegated to coastal duty as a result of age and capability. Her maintenance was beginning to slip in the second year of the war. The lantern cover was original equipment and needed repair but had been left untouched at their last refit.

And even the tiniest white light is visible at long range on dark nights on the water.

A pinpoint of light was detected in the periscope on high magnification as it swung through its arc by the skipper of the Ray. He at first passed the light but then came back to it.

“Ah, ha – got you...” he muttered under his breath.

He could make out a faint outline of the bridge from the Patrol craft stopped directly behind them, 900 yards down the beach.

The bow of the Patrol Boat was angled at 30 degrees to the stern of the Ray, stopped dead in the water, pinging their sonar at maximum power then reducing to minimum to try and find the Ray.

Voices from the Japanese Patrol Boat could be clearly heard by Lance and Nate, and a vigorous discussion seemed to be taking place on the main deck.

Sailors were forming up on deck and getting ready to put the Daihatsu-class landing craft over the stern. The Naval Landing Force made up of the ship's crew was preparing to board the craft for the run to the beach and a search for the one who had made the distress call.

"Down periscope!"

"FIRING POINT PROCEDURES, STERN TUBES 7 AND 8!"

The firing solution took three minutes to complete as the Captain barked, "Don't polish the cannonball, dammit, get it done!"

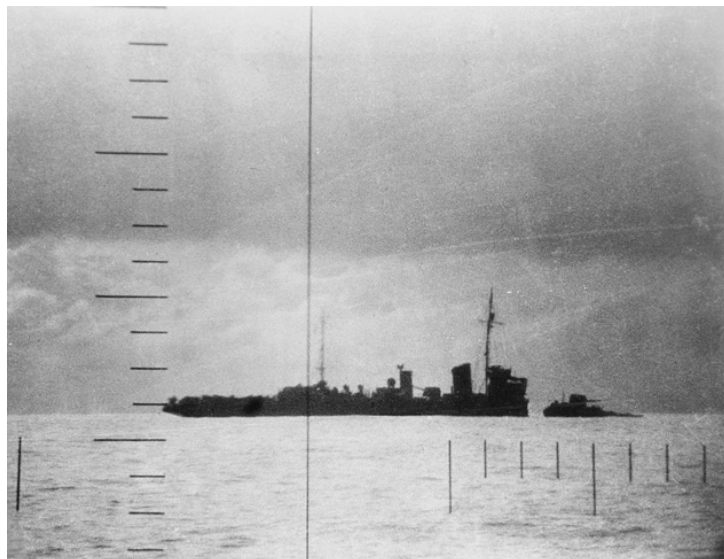
In another 30 seconds the command was given, "FIRE TUBES 7 AND 8!!".

A Mk 14 torpedo needs about 750 yards of running hot, straight and normal before it is properly armed to detonate on impact.

The two fish had 150 yards of margin and within seconds of arming they both slammed into the starboard bow of the Patrol Boat.

The front of the ship exploded in a spray of water and debris, breaking the ship completely apart a third of the way down the deck and began to sink. Japanese sailors not killed in the combined destructive power of a thousand pounds of high explosive dove overboard into burning oil on the surface.

The periscope broke the surface and the skipper saw the ship, broken in pieces, sinking into the sea...



The Japanese escort vessel *Patrol Boat No.39* (originally the destroyer *Tade*) sinking after being torpedoed by the U.S. Navy submarine USS *Seawolf* (SS-197) 280 km north-east of Formosa on 23 April 1943. Photographed through *Seawolf's* periscope.

Chapter 10 Paradise April 2, 1943



The sun rose over the mountain, splashing early morning warmth over the beach - a splendid day in the South Pacific.

The events of the early morning before sunrise were a jumble in the minds of Nate and Lance.

The flash of the explosion when the torpedoes struck the Patrol Boat momentarily blinded them and the sound was deafening – the ship was only 300 yards down the beach when it was hit.

Stunned, both men were left with a vivid afterimage in their retinas of palm trees backdropped by a brilliant orange after the explosion. The image would not die away for several seconds.

Pieces of ship, burning combustible material and body parts rained down on the palm trees around them and the stench of burning oil was overpowering.

They would never forget the sensations of that night and talked about it a few times later in life when they got together with their PBY squadron at reunions.

But just now they were scrambling for their lives and wondering what, exactly, had happened.

The cries of drowning and burned Japanese sailors could be heard in the distance but it had been over two hours since the sub torpedoed the Patrol Boat and now it had become still – only the bird calls of the jungle broke the silence.

Nate and Lance had headed for the river after they recovered from the explosion – it was still pitch dark, but they knew the way to the river by memory and could feel their way along. And it was directly away from the sinking ship and the survivors, if there were any, who made it to shore.

They hid under an embankment on the river they had discovered on an earlier foray and hoped and prayed no crocodiles were around – Lance had already stepped on a log in the water near a ford and discovered to his amazement he had put his foot down on a 7 foot crocodile which immediately started out from under him.

“That was a sub, for sure, and he must have blown that ship out of the water!”

Nate agreed as they pulled themselves out of the riverbank and climbed up to look seaward.

They saw nothing but a calm sea and blue sky on a beautiful morning in the South Pacific.

A real paradise.

They heard only the rustle of jungle creatures and birds. Exotic birds that lived exclusively in the Solomon Islands, the ‘ku-ku-ku-ku’ of the loudest birds sounded eerie just before the sun rose in the pre-dawn mist.

“Let’s head down the beach a way and see what we can see...”

They crawled down to the edge of the beach, both shirtless now, deeply tanned and wearing only their boondockers and cut-off dungarees. The jungle was stifling hot unless the onshore sea breeze blew which occurred only in the morning when the island warmed up in the Spring and the heat rose up the mountain drawing in cooler ocean air.

They looked like castaways, or pirates - which was only half wrong. The only weapon they had was Lance’s Ka-Bar and they felt completely naked.

Keeping their heads low, they craned their necks around the trunk of a palm tree and looked down the beach.

There was nothing to be seen.

Hundreds of yards further out from the beach there was an oil slick on the water but other than bits of flotsam and jetsam and an occasional body they saw no ship and no signs of life.

“Wait – what is *THAT?!’*”

A few bodies had drifted closer to shore, face down, bobbing in the light breeze.

A slate grey dorsal fin slowly appeared above the surface near a body.

The sailor's torso twitched and jerked – and disappeared in a slashing splash.

“SHARKS!”

They had heard about this type of attack but preferred not to believe it – just some sailor's idea of a dark sea story – but it was common in the sea around the Solomon Islands which have over 30 different types of shark including the Great White.

Nate shuddered and remembered how badly he had wanted to serve on a surface ship. Now he thought it wasn't so bad flying on a PBY as he pulled back from the beach, shaken and sick at a sight he would never forget.

In the safety of the jungle they held a powwow – what do they do now?

They were certainly discovered by both sides – the American submarine knew they were on the island and so did the Japanese.

If there were survivors from the ship, they had not been seen nor heard.

It would not be long before a Japanese patrol would come to investigate when No. 38 did not transmit a report and then there would be follow up and an investigation.

Any Kawinishi patrol plane would certainly be able to see that a ship had been sunk off the bay and the submarine undoubtedly would have left the area, probably back out at sea to wait for another indication they were still around and looking for rescue. The boat would now be extremely cautious for some time to come but they were certain they would not be forgotten.

“I think we should bury the raft, take down the antenna and hike up the beach with the Gibson Girl. Let's get as far away from this spot as we can and stay in the jungle. We can always use the signal lamp on the Gibson to try and contact the sub at night.”

Lance nodded as Nate started climbing...



Great White Shark – common in the Solomon Islands

Chapter 11 “TANK” April 3, 1943



Theodore “Tank” Benson staggered out of the head on the submarine, rubbing his eyes tenderly, then massaging the sides of his head in agony. Squinting against the bright light coming through the watertight door to the radio shack all he said was, “Oooooohhh... I should know better than this”.

Yes, he should – he had had hangovers like this all over the world, wherever his boat pulled in to port, and once - but only once - while actually running submerged.

Both Tank and a torpedoman were busted for that one – using two parts gilly alcohol from torpedoes mixed with three parts pineapple juice and strained through a loaf of bread for a snort of submarine ‘torpedo juice’ was more than frowned upon – especially at sea.

That bit of folly might have gotten them booted off the boat if the war had not been raging.

Or blinded at worst – the ethyl alcohol was only partially strained out by the compressed bread strainer.

And there was that time in Singapore where he actually had gone to sick bay on the boat and begged for morphine.

Ferguson laughed in his face.

It was not often that a 2nd Class Pharmacist Mate would dare laugh at a Chief Petty Officer in the old ‘rocks and shoals’ Navy but Ferguson knew Tank and had helped him out before - a bit of aid on the side that would have earned him a Captain’s Mast with a reduction in pay and busted back to 3rd Class Petty Officer if anyone knew about it.

But they didn’t.

Such is the way the Navy worked in World War I and now in World War II.

Tank wasn't technically an alcoholic by the day's standards – he spent too much time at sea to have access to real alcohol for that – but when they hit port and had liberty, well, he enjoyed himself immensely.

And if you were part of the radio gang on his boat, you would be treated to what would later be called a 'pub crawl', the likes of which modern day frat-boys have no idea.

Tank and his radiomen were known by Shore Patrol personnel all over the Pacific.

He had been in the Silent Service for 26 years, made Chief twice, busted three times to lower rank and had a row of campaign ribbons unlike anyone else in the Submarine Service.

In other words, he was a legend.

Every Radioman in the 7th Fleet knew his fist when they heard his CW and not a few Marines knew his fists from scrapes in barroom brawls.

He had sailed and fought in two wars - in the Mediterranean Sea, the North Sea, both the North and South Atlantic, the South Pacific and now he was fighting in the South China Sea and headed for the Solomon's.

All in submarines and all in the radio shack.

In addition to holding the certificate of a Speed Key Morse Code operator, and thus qualified to use a bug on Navy radio circuits, he was also qualified on all small arms in the weapons locker on the USS Barb, SS-220. The standard issue for fleet boats of WWII included the M1911 .45 pistol, the Thompson submachine gun, the M-1 Garand and sometimes a 1903 Springfield - every sailor knew how to use them.

Tank would later be part of the Barb's landing party that made history on July 23, 1945 when they blew up a train on the Japanese coast with the scuttling charge from their boat.

But now in early April 1943 the Barb had been detailed to take the place of the USS Ray, SS-271 on patrol in the Solomon Sea off the coast of New Guinea.

Barb had just finished refit in Brisbane, Australia where Tank met his very own 'shiela' who had taken a fancy to him while they were tied up alongside the tender. He left for patrol with a heavy heart and a light wallet. As a single man of the sea Tank had steered away from marriage but he fell in love in Oz, "the land of a thousand wives" like many other American military men in the war.

The SS-220 sailed for rescue duty off Bougainville – with a full complement of Mk 14's, a deck gun ammo locker jammed with 3-inch shells and a hungover Chief Radioman...



USS Barb SS-220

CINCPAC	CINCPAC FLT
SPEED KEY	CERTIFICATE

On this the 5th day of October 1937 A.D.

Theodore O. Benson RMC(SS) A434486

has successfully complied with the prescribed requirements for and is duly awarded speed key certificate No. CLF-Y-42. He is thereby authorized to use a speed key while operating on radio circuits at this Headquarters and/or in the flagship of the COMMANDER IN CHIEF CINCPAC and U. S. CINCPAC FLEET or subordinate commands thereof.

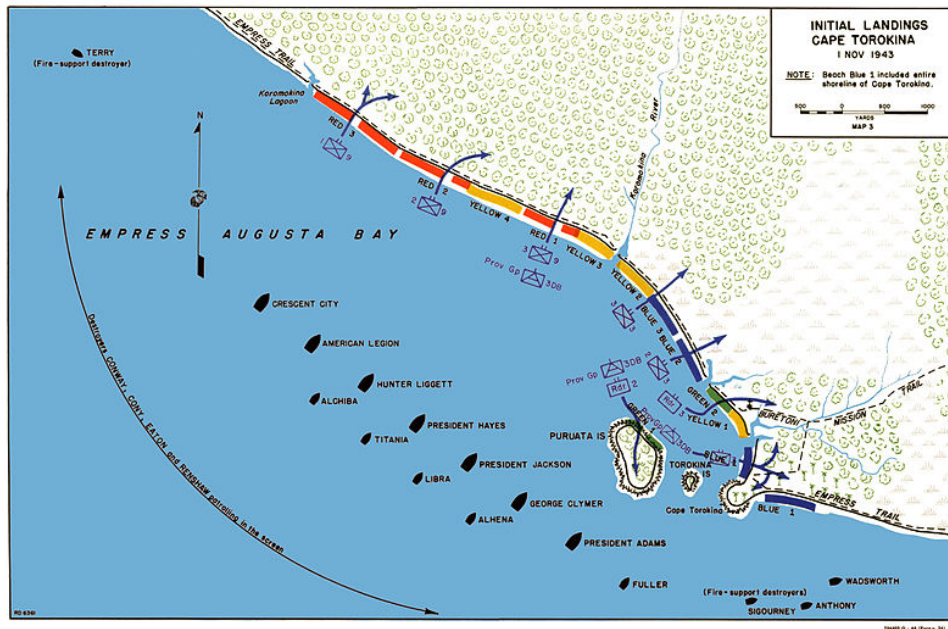
This certificate shall remain valid until holder is discharged or certificate revoked.




 J. D. LINEHAN
 Captain, U. S. Navy
ADD. US FOR COMMUNICATIONS

1-15.6-2-20-1-5-15.6-1-10

Chapter 12 Cape Torokina April 5, 1943



Two days later, Nate and Lance had hiked through the edge of the jungle along the Bay, keeping out of sight of the water, traveling mostly before daybreak and after sunset to give themselves the best chance of being unseen.

There had been multiple passes by Kawanishi float planes over the area and another Patrol Boat had come into the Bay and sent a search party on shore.

The Japanese Naval Landing Party covered the Bay from the point where No. 38 had been sunk for another 10 miles up to the two Magine Islands on the north but kept along the beach for the most part. Patrolling further into the jungle was unnecessary – it was so thick and dense that if anyone had tried to head further into the island, they would have quickly seen it was fruitless. It made no sense for any survivors to attempt moving inland unless they had very sharp machetes.

The patrols turned up nothing and the Japanese returned to sending Class-31 Patrol Boats along the coast, listening on their receivers for any signal from downed fliers or Coastwatchers who they knew were instrumental in finding and helping stranded Americans.

They were correct in assuming downed fliers were still on the west side of the island somewhere but without a means of locating them it was a lost cause looking for them.

They would wait patiently and set a trap for the next rescue attempt which, knowing the Americans, they knew would come. Downed Japanese fliers were expected to fend for themselves and fight out the rest of the war where they landed with whatever means available.

The Coastwatchers were still stationed on the other sides of the island and made no effort to come to the western side – and at this point did not know Nate and Lance were on the island. The mountain had blocked the 500 KHz signal at their low power level.

Nate and Lance had maintained radio silence to let things settle down before they made their next move.

Shortly after the encounter with the Patrol Boat, Tom Chittenden on the USS Ray had been instructed by the skipper to prepare a coded message informing CINCPAC FLEET of the attempted rescue and consequent sinking of the patrol boat. He sent it during the following night's battery charging session on the HF circuit at 10,515 KHz.

By that time, they were 40 miles up the coast - dealing with a malfunctioning freshwater distillation unit.

This was critical as the consumption of freshwater on a diesel submarine is essential for providing high purity water for the batteries which, in addition to engine makeup water and human needs would consume 4,000 gallons a week.

Having one of the two distillers down would cripple the sub's ability to fight and thus the Ray was headed for port and repairs.

During the next week's voyage, the sailors would be deprived of their usual twice weekly "Navy shower". Which was actually a luxury compared to the deprivations of the Japanese submarine and German U-boat sailors who would have been amazed at the thought of washing that often.

By 1943 CINCPAC had a functional network set up for rescue of downed fliers in the 7th Fleet and it kicked in when they heard that sailors were assumed still alive on the west coast of Bougainville.

The USS Barb was vectored toward the island to replace the Ray and through coded message was told they could expect out-of-the ordinary Morse code messages from a weak Gibson Girl signal.

With that information Tank Benson – who was unfamiliar with American code characters - rooted through the small library of books kept in the Barb's radio shack looking for an old copy of one that he knew had the American Morse Code in the back. It was a "History of Telegraphy" book he had found in a bookstore next to a pub in Bantry, Ireland – Ma Murphy's on New Street - and Tank hung on to it for years. He had it on his first boat in WWI – the L-11 and read it on patrols off the British Isles in 1918. And he had quaffed many a pint in Ma Murphy's pub while the boat was in Ireland.

In the bottom of a locker under the spares compartment in the radio shack he found what he was looking for and began to memorize the new code in anticipation of the coming operation.

— — — — —

Lance and Nate had progressed along the Bay to the westward curve at the north end that jutted out to a couple of small islands at the point – Cape Torokina.

They surveyed the area carefully and decided where to put the long-wire antenna in the coconut palms and set up the Gibson Girl.

Their accommodations were sorely lacking this time without the life raft, but they recreated a rough lean-to with palm fronds and in short order were in business again.

“Lance, everyone knows we’re here now. We are going to have to be extremely careful what we transmit since that fracas down the bay.”

Nate had been thinking about their next move and the plan he laid out for Lance was simple.

They would only transmit a single long dash of 2 seconds and do so randomly. If a submarine was in range, they would be able to locate them again - at least he hoped so.

Nate was still amazed that the sub and the patrol boat had somehow both managed to find him at the same time – that it was coincidental was a one in a million chance and he doubted it was just bad luck. But he could not fathom how it had happened.

At random intervals on the top and bottom of the hour they would send a single word in reverse order, International and American Morse code intermixed to indicate that they would use the Gibson Girl signal lamp once they had been located. And he would send it as fast as he could work the pushbutton code key.

The code, as crude a scheme as it was, would then look like:

P	M	A	L
— — — — —	— — — — —	— — — — —	— — — — —

If anyone was close enough to hear their signal it would become clear within an hour what the deal was – LAMP should be obvious that they would communicate with the sub by signaling lamp.

And Nate had to count on the Japanese not being so clever on every patrol boat in decoding his cipher - just how many Japanese could possibly know American Morse code used on the railroads in the US, Canada and Mexico?

Nate hauled the wire up in the trees and they hoped and prayed the submarine was still in range...

Chapter 13 “NANCY HANKS” April 7, 1943



Each night since they had arrived at Cape Torokina Nate fired up the Gibson Girl with Lance cranking patiently at 80 RPM.

They randomly sent the 1 KHz CW tone for 2 seconds and then sent the PMAL hybrid code message, again randomly, at the top and bottom of the hour.

There was no activity off the beach that indicated anyone was listening.

But they were.

The USS Barb had taken up station off Bougainville and was cruising submerged at 1 knot, fast enough to get good rudder control on the planes but not too fast and the skipper was occasionally using the periscope to examine the jungle for any sign of the two. Even on high magnification with all of the light-gathering coating of the periscope aided by a crescent moon he could see nothing of interest.

Lieutenant Commander Harold Morgan had been the skipper of the Barb since she was commissioned in July of 1942 at the Electric boat Company, in Groton, Connecticut. He was Welsh by birth and went by the nickname Hank by his close friends who saw elements of Sir Henry Morgan in his combat tactics in the fleet.

Morgan had taken her out on her first sea-trials and commanded the boat up to the current mission with a crew of sailors and wardroom that would be the envy of the Silent Service when the war ended.

The Barb would win more medals and sink more tonnage than any other fleet submarine during the war.

But now she was looking for downed fliers off Bougainville.

On the second pass along the Bay the boat surfaced 8,000 yards off the point of Cape Torokina and Radioman 3rd Class Tony Amarone immediately thought he heard a faint signal on 500 KHz.

Just a single tone that lasted a few seconds, but he was sure he had heard it.

“Hey Chief, I think I got somthin’ here, put on cans and see what you think...”

Tank Benson put on a set of headphones and listened to the receiver. Dead quiet with occasional static bursts from a squall and lightning somewhere out at sea but nothing else was readable.

Then they both heard,

— — — — — ————— — — — — — —————

“That’s it! Chief, that’s a CW signal with both codes – it has to be them!”

The Chief smiled. He was proud of his radio gang that they had memorized the American code characters as he had and now it was paying off. Even with a lousy fist they could still both make out the characters.

“You’re right, Amarone, we got them. But we need to get a fix.”

Tank stuck his head out of radio and called to Control – “Skipper, we have the guys on the beach on the distress frequency.”

Morgan passed the conn to the XO and stood in the open door to radio.

“What have you got, Chief?”

“They are sending a single word, it reads PMAL which makes no sense, but it is in mixed International and American code, so it has to be them. That’s what the Ray operators told us they would do...”

“Hmmm... all they have is a Gibson Girl so what could that mean?”

Amarone piped up and gave his opinion. “Captain, the Gibson Girl can transmit either CW or be used as a signal lamp, but it can’t receive. Maybe it’s their way of telling us we should communicate with the signal lamp – the word is just spelled backwards.”

“Good thinking, Amarone –you’re probably right - let’s figure out how to handle this.”

The skipper’s mind was racing.

“First we need to get a fix on them with the RDF if that’s possible. Any chance of that?”

The Chief told him that it might be possible if they were close enough and the signal stayed on long enough.

“OK, then, let’s plan an approach closer to the beach and fire up the RDF and see what we can find. Then we can go Nancy Hanks¹ with them.”

“Uh, Skipper, Nancy Hanks would work fine if they had infrared capability, but they won’t. All they have is white light.”

“You’re right, Chief, it couldn’t be that easy. We can still put a red filter on our signal lamp, but they stand a great risk using the lamp like that. Let’s hope they think this through very carefully and, we still don’t know if they’ve been compromised – this could be a trap.”

Spoofing each other’s code signals was a common trick and had been done by the American’s using telegraph signals since the Civil War.

In the war between the states it was not uncommon for a Union signalman to cut in on the line of Johnny Reb’s telegraph circuit (and vice versa) and try to impersonate the other side to send disinformation.

In at least one classic case, the two opposing operators discovered they knew each other by recognizing their fists – they had worked on the same railroad from Washington to Richmond before the war. They acknowledged each other, traded barbs then signed off, wishing each other well and hoping for a quick end to the war.

The Barb turned 90 degrees to starboard at a depth of 60 feet and began its approach to the shore as a Kawinishi float plane flew up the Bay...

¹ “Nancy Hanks” was a secret code word used by the US Navy in WWII that was sent on VHF radio to another ship indicating they should switch to communication via infrared signaling, invisible to the naked eye. The signal was transmitted from a signal lamp with infrared filters and received by an infrared telescope. Nancy Hanks was the mother of President Abraham Lincoln.

Chapter 14 “あれは何でしょう?!” April 8, 1943



Nakajima A6M2-N "Rufe" from Sasebo Air Group in flight.

“What’s that?!”

The sight of a metallic flash in the trees along Cape Torokina at first looked like gun fire and the pilot instinctively yanked the stick back and to the left kicking in rudder to pull the aircraft up and away from the threat.

The floatplane was surprisingly nimble and responded swiftly to the control input as Tadashi Yamaguchi swung the craft in a wide loop into the setting sun, turned at the bottom of the bay and lined up again on the beach just south of Cape Torokina.

This time he had his eyes peeled sharply along the tree line and his finger on the trigger of his guns.

The Nakajima A6M2-N flew more like a fighter than a floatplane – and indeed, a version of the aircraft without the center float was the infamous Mitsubishi “Zero” fighter that kept the US Navy and Marine Corps pilots on their toes with its fabulous aerial combat capability.

Yamaguchi slowed down to 150 knots and looked intently at the coconut palm trees as he flew up the beach at tree top level.

“はーはあ!”

“Ah-ha!”

Flying level with the tree tops he could just make out an occasional flash of metal – like wire – strung from several trees.

“This must be an antenna – we have found the Americans!”, thought Tadashi as he pulled up and flew out over the sea into the setting sun.

“I will make one more pass and see if I can spot them...”

The floatplane lined up on the beach, flying just barely over the water which gave him the best chance of seeing anyone back in the jungle, if they were so stupid as to let themselves be seen.

He knew with already having made multiple passes that anyone there would be hidden – but you never knew...

Nate and Lance were quite well hidden and impossible to be seen by the Rufe but they had eyes on him each pass – and they were extremely concerned.

They knew the pilot would be on the radio already giving information to his command on what he had found – no other patrolling Japanese, air or sea, had spent any time on them after the initial landing party had scoured the Bay.

The previous night they had made contact with the Barb – the scheme had worked as he had hoped – better than he had hoped, actually, and they were set for an extraction later that night at midnight.

The Barb would come into the beach as close as possible and send a landing party ashore to pick them up. The whole thing would take less than an hour if all went well – the Barb would be able to come in just south of the islands off the cape, close to shore and it would be an easy paddle to the beach and a quick pick up.

Piece of cake.

The Japanese Naval Base on Shortland Island at the bottom of Bougainville launched a Class-31 Patrol Boat toward Cape Torokina upon receipt of the radio message relayed from Yamaguchi through Rabaul.

The relay took over an hour due to traffic on the circuits and the complexities and chaos of combat networks in the Japanese communications command structure.

By the time the Patrol Boat left the base it had another 4 hours of steaming up the coast to reach Cape Torokina.

Yamaguchi had found the antenna wire just before sunset at 1940h local time which meant the Patrol Boat would reach the cape just before midnight making its maximum speed of 18 knots.

That is, if everything went perfectly.

Lance and Nate spent the next 4 hours anxiously anticipating the sound of a diesel submarine on the surface and were relieved when they heard the boat from 1,000 yards out at 2315h that night.

Again, as happened before, both the submarine and the Patrol Boat radars found each other but this time both were caught in the open and on the surface.

The maximum range of the naval guns on the Patrol Boat were 10 miles but the guns were not radar controlled. The Japanese were masters of naval warfare at night and used powerful search lights to great effect in illuminating their target and delivering knockout blows at long range – out to 10,000 yards depending on the gun's effective range. The gargantuan naval battles off Guadalcanal were a brutal lesson for the US Navy in 1942 as to the prowess of the Imperial Japanese Naval night fighting doctrine. Radar was certainly not the answer to everything in combat.

The Barb had just released a rubber raft with the shore party from 500 yards off the beach when the first ranging shells from the Patrol Boat hit 270 yards short of them.

Battling a submarine from a surface ship at close range is a risky venture – not unlike a knife fight in a phone booth for both combatants. The sub would submerge rendering naval batteries useless and leave the surface ship dependent on depth charges unless they carried torpedoes, which Patrol Boats did not.

And, in a fight of this type, the old submariner's rubric was apropos: "there are only submarines and targets", i.e., to a submariner, a surface ship is simply something to be torpedoed.

It all depended upon closing range of the two ships and the aggressiveness of the captains.

Captain Morgan was about to cement his place in naval history and the ensuing engagement would be studied in detail at the US Naval War College in Newport, Rhode Island for decades to come...

Chapter 15 *DIVE!* April 9, 1943

The next shell from the Patrol Boat landed near the bow of the boat as the skipper ordered "Dive!" and the hatch slammed shut to the conning tower. Water cascaded into the control room drenching everyone around as the third shell exploded, rocking the boat.

The concussion jarred the Mk 14's in their cradles in the forward torpedo room – the most critical components inside the weapons, the gyros, absorbed the shock. Another close call like that and the fish might not be accurate when fired – the gyros were robust to a point but if the cam pawls

were misaligned by a thousandth of an inch, the torpedo would wander off course after being fired.

No damage occurred but they were at a disadvantage having been dead in the water after the landing party left in the raft.

Tank and two others were armed with .45's and Thompson submachine guns - paddling furiously for shore as shells now rhythmically peppered the water around the area. Spray from the hits splashed over them and nearly capsized their raft.

The Barb purposefully had stayed 500 yards off the beach to give adequate room to maneuver and now they needed every yard.

Flooding the main ballast tanks began the process of diving the boat but they had no weight on to give positive control on the planes yet – they were struggling for speed in order to face the enemy.

Securing the diesels lightning quick and cutting in the batteries was essential for delivering torque to the shaft in a crash dive – the timing had to be perfect or the diesel would suck the air out of the boat in seconds.

The Patrol Boat was steaming ahead at top speed, over 18 knots and firing now as quickly as the reloader slammed another shell into the breech.

As the boat slid under the water the Japanese captain ordered cease fire and turned to the SONAR operator,

“あなたは何を持っていますか?!”

In reply to the request the operator reported the range and bearing to the boat, which was now gaining speed and depth, swinging to starboard and heading down the bay toward them.

The closing speed was approaching 24 knots as both captains continuously calculated range and bearing.

The Patrol Boat's only option now was to defend itself against torpedoes and commence dropping depth charges as soon as they closed range.

The Barb's XO, Lieutenant Sven Ruchti, was a Swiss descendant of a famous family of watchmakers and a graduate of the University of Minnesota. He had played hockey in college and was the proud possessor of a wicked slapshot – the most difficult shot in the sport.

Ruchti and Captain Morgan talked hockey often and the slapshot was frequently the topic. The skipper loved to hear Sven go through each of the four motions involved in turning the shot into a goal and he often visualized the approach.

Morgan had played hockey at the Academy but never perfected the shot.

Now he would take his chance with the submarine and a nautical version of the technique – the risky ‘down-the-throat’ shot was very difficult to execute, and few boats had done it right. The USS Wahoo SS- 238 skippered by “Mush” Morton had been the first boat to pull it off, sinking a destroyer. The Wahoo would be lost later in October of 1943 with all hands.

The Patrol Boat was now steaming full speed ahead and the range was closing at a rapid pace – too rapid for the skipper.

Morgan had the periscope pointed straight down the throat of the approaching ship and was giving direction to the planesmen to keep the submarine centered on the bow of the approaching craft.

“FLOOD TUBES 1,2,3,4!!”

“OPEN OUTER DOORS!!”

The skipper made one final check on the bearing – the Patrol Craft was bore-sighted, dead ahead and now 2,000 yards out. He had the fish set for running depth just under the surface to account for the shallow draft of the ship.

“FINAL BEARING AND SHOOT!!”

Tubes 1 through 4 gave their signature ‘*whoosh*’ and the boat groaned under the immediate release out of the tubes of the combined weight of 13,000 pounds of torpedo.

“FLOOD TUBES 5 and 6!!”

“OPEN OUTER DOORS!!”

The first salvo of four had the desired effect in this deadly game of chess.

The Japanese lookouts saw the torpedo wakes in the moonlight and the ship turned hard to port – careening away from the beach and directly into the path of the new firing solution Barb was now computing.

At a range of 1,200 yards Morgan had a solution worked up for a spread of two torpedoes on a deflection shot that should catch the Patrol Boat amidships if his plotter was right.

The Barb, brought to 2 knots, waited until the range closed to 1,100 yards and at a relative bearing of 30 degrees Morgan gave the fire command for tube 5.

He waited one second and fired tube 6.

The XO had his eye on the stopwatch and at a speed of 40 knots the fish hit the Patrol Boat amidships with an explosion of such magnitude the crew later said it felt like a depth charge outside the hull.

The one-two punch broke the ship in half - on fire, explosions ripping through the hull, igniting the powder magazine and depth charges - she disappeared in a massive fireball.

The only witness was Captain Morgan, watching in disbelief through the periscope.

He had never been able to make a slapshot work until now...



Chapter 16 Home December 15, 1945



Nate stepped on to the platform in Flagstaff on a brilliant December morning with a brisk north wind. He pulled the collar of his peacoat up and jammed his hands in his pockets as he walked into the depot.

At 0700 on Saturday morning Nate and thousands of other Marines, soldiers and sailors were working their way across country to home.

The war had ended on September 2 with the formal surrender of Japan and the entire nation celebrated like there was no tomorrow.

There almost hadn't been, but it was all over now.

Nate looked around and headed into the station agent's office where the telegraph operator was working his bug on a wire to Ash Fork, west of Williams.

As he entered, he passed a pretty young woman with dark hair and high cheek bones who glanced at him with a friendly smile.

He nodded politely and their eyes met and held for a brief second.

"Hmmm... thought Nate, now there's a **very** nice-looking young lady."

The operator slid the circuit closer over on his bug and turned around to say something to her as she walked out and saw Nate coming toward him.

TJ took in the full height of the sailor and a vaguely familiar feeling came over him as Nate approached.

Nate stood looking at TJ and TJ stared back.

“You probably don’t remember me, do you?”

TJ leaned back in the wooden swivel chair, arms on the rests and a slow smile crept across his face.

“You’re Nate Miller, aren’t you?”

“Yes sir, I am. I am on my way back to Ohio and wondered if you would still be here.”

TJ leaned forward in his chair and began to rub his eyes. He took out his red-checkered bandana, blew his nose, dabbed his eyes and said,

“Give me a minute...”

TJ and Charlie had kept up the conversation since Nate was shot down and listed as missing in action in 1943. The government had finally gotten around to notifying his family that he was alive and in good health but neglected to tell them Nate would spend the rest of the war in the South Pacific, flying PBY Black Cat and Dumbo missions. That information was passed along via the Victory Mail system set up to handle letters to and from home and fleet.

Compared to his first year of flying, the rest of his wartime experiences were relatively tame – the shifting tide of the war changed the nature of the missions he flew - less aerial combat and many rescues at sea.

Now Radioman 1st Class Nathan Miller was headed home and on to the next phase of his life.

TJ stood up and shook Nate’s hand and had him take a seat.

He filled Nate in on the conversations he had had over the years with Charlie and the angst every operator from Flagstaff to Ohio endured during his time after being shot down in 1943.

As they chatted, the same young woman came back into the office and TJ said,

“Nate, I want you to meet Jane – she is a new station agent and soon will be a lightning slinger with me. Her father is Billy Begay, our night shift operator, and by the way, she has a brother in the Marines, too.”

Billy Begay was Navajo, a descendant of a great Navajo chief of the “Folded Arms People Clan” and had learned telegraphy in Farmington, New Mexico. As an operator on a narrow-gauge line that ran up to Durango, he had passed the code skill on to Jane and her brother, Frank.

Jane’s brother had enlisted in the Marine Corps and many years later it would be revealed that Frank Begay had fought in the Pacific as one of the Navajo Code Talkers.

Nate stood and shook hands with Jane and the two looked into each other's eyes – in that moment the spirit of Tecumseh, Shawnee Indian chief, met the spirit of Manuelito, (*Nabaah Jilt'aa*), the greatest of the Navajo chiefs.

It was clear an understanding had developed between the two...

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The End

Author's Biographical Note

Bob Houf was a US Navy submarine sailor, MT1(SS)DV, having served aboard the USS Alexander Hamilton SSB(N) 617 Gold Crew for 6 Polaris deterrent patrols during the Cold War (1967-73).

His father, W.E. Houf was a 2nd Lieutenant in the US Marines 1st Division and fought on Guadalcanal from 7 AUG to 22 Dec 1942.

The technical details in this story are essentially accurate and effort was made to ensure that the story was feasible, although it is fiction. For example, Master Chief Petty Officer Lou Benson TMCM(SS), a Torpedoman, had this to say about the use of the Mk 14 torpedo gyro cam pawls' susceptibility to shock:

"You were right on about the gyro and cam pawls in the MK 14."

Some of the characters in the story - Charlie, Tank Benson, Lieutenant Jantz are caricatures of real people, with enough changed they won't recognize themselves, at least for those still living.

Bob is a code operator, using both International and American Morse code. His radio amateur call sign is K7ZB and he learned the Morse code as a 13-year-old in 1963, taught by an old lightning slinger, Charlie, K8OUQ in Chillicothe, Ohio.